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UNIVERSITY OF CALIFORNIA

CALIFORNIA-ARIZONA ECONOMIC INTERDEPENDENCE AND WATER TRANSFER PATTERNS

by
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and
H. O. Carter

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CALIFORNIA-ARIZONA ECONOMIC INTERDEPENDENCE AND WATER TRANSFER PATTERNS

by

D. Ireri* and H. O. Carter**

INTRODUCTION

The competition for scarce natural water supplies is of major concern in the western United States. Policy makers in areas of current water surplus are reluctant to consider major interbasin diversions to the arid and semiarid areas since the competition is not only for current supplies but often for perpetual legal rights to continuing flows from streams and underground aquifers. On the other hand, it is generally recognized by regional planners that the economies of the water "haves" and "have-nots" show important interdependencies indicating large internal markets for many of the products produced within the western region. Agricultural interests have especially important stakes in the rivalry since crop sectors are the major users of the available water, although it is readily accepted that crop and related agricultural sectors are economically interrelated with nonagricultural sectors, locally and regionally.

Accordingly, it has been argued that regional and multiregional input-output (I-O) analysis has much to offer in providing not only a consistent system of product accounts but also a framework to integrate water resource needs and water development programs with forecasts of regional economic activity. Martin and Carter outlined a procedure for obtaining "water

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multipliers" with reference to a California input-output model at the Western Farm Economics Association annual meeting in 1960.[1/] Major emphasis for the Martin-Carter study was placed on agricultural sectors which comprise 15 of the 26 endogenous sectors.[2/]

Subsequently, Zusman, Hoch, and Lee have modified the 1954 California model of Martin and Carter to analyze and project growth of the California economy with primary emphasis given to water requirements.[3/]

Research relating to this area has been conducted also by the Sanitary Engineering Research Laboratory, Berkeley. Lofting and McGauhey illustrate a method of superimposing the average water-use pattern on a 56-sector interindustry transaction matrix developed by F. T. Moore for the year 1947 and, subsequently, of using such coefficients to trace out California interindustry water requirements.[4/] A recent extension of this analysis by Lofting and

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1/ Martin, William E., and Harold O. Carter, "Problems and Applications of a California Interindustry Model," *Western Farm Economics Association Proceedings, 1960*, 1961, pp. 126-145.

2/ Martin, William E., and Harold O. Carter, *A California Interindustry Analysis Emphasizing Agriculture, Part I: Input-Output Models and Results. Part II: Statistical Supplement*, Berkeley: University of California, Agricultural Experiment Station, Giannini Foundation Research Report No. 250, February 1962, 79 pp. and 121 pp.

3/ Zusman, Pinhas, and Irving Hoch, *Resource and Capital Requirement Matrices for the California Economy*, Berkeley: California Agricultural Experiment Station, Giannini Foundation Research Report No. 284, August 1965, processed; Lee, Ivan M., *A Model for Examining Sensitivity of a Regional Economy to Alternative Growth Constraints*, Berkeley: University of California, Agricultural Experiment Station, September 1965; and Lee, Ivan M., *Conditional Projections of California Economic Growth*, Berkeley: University of California, Agricultural Experiment Station, Giannini Foundation Monograph No. 19, February 1967.

4/ Lofting, E. M., and P. H. McGauhey, *Economic Evaluation of Water, Part III: An Interindustry Analysis of the California Water Economy*, Berkeley: University of California, U.C. Water Resources Center Contribution No. 67, January 1963, processed.

McGauhey involve (1) construction of an 81-sector California I-O model patterned after the 1958 National Interindustry Study and (2) restructuring of the model into a linear programming framework.[1/] These results provide much information relevant to understanding the interdependence of water demand from competing sectors of the economy which should ultimately aid in the formulation of state and federal water policies.

Interest is focused now upon the construction of a western states multiregional model which will link together the models presently available from the various states. In recent years, I-O tables have been constructed for Arizona, California, Colorado, Oregon, New Mexico, Utah, Washington, and for a number of subregions in some states and for the subbasins of the Colorado River.[2/] The only attempt to link together these states was accomplished by Davis who constructed a 15-sector model, with one sector representing agriculture, for eight western states or regions.[3/]

This paper reports on an attempt to link, via I-O, two contiguous states--California and Arizona--that currently are embroiled in a legal conflict over water allocation rights from the Colorado River. While we view this work as a pilot study that should indicate some of the empirical and methodological problems to be encountered in the more ambitious venture of linking eleven western states, the results nonetheless may have relevance for water allocation policies with respect to industrial and agricultural production for these two states.

Specifically, for this report, we pose such questions as: Given particular emphasis to heavy water-using agricultural sectors in both states,

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1/ Lofting, E. M., and P. H. McGauhey, *Economic Evaluation of Water, Part IV: An Input-Output Linear Programming Analysis of California Water Requirement*, Berkeley: University of California, U.C. Water Resources Center Contribution No. 116, August 1968, processed.

2/ Bourque, Philip J., and Gerald Hansen, *An Inventory of Regional Input-Output Studies in the United States*, Seattle: University of Washington, Graduate School of Business Administration, August 1967.

3/ Davis, H. Craig, *Economic Evaluation of Water, Part V: Multiregional Input-Output Techniques and Western Water Resources Development*, Berkeley: University of California, U.C. Water Resources Center Contribution No. 125, February 1968.

what is the extent and nature of the economic interdependence between the economies of California and Arizona? What are the technical water requirements of different sectors in California and Arizona and how are these requirements related to economic activity within California and between California and Arizona? What are the direct and indirect water requirements of sectors in both regions in response to changes in final demand for products in each state?

The previous Martin-Carter study used a 1954 base year; this study represents an updating and extension of the same model and follows the same basic procedures for the two states for 1958. As discussed in more detail in the report, one of the most difficult aspects of linking regional or state I-O models together when prepared by different research groups is reconciling the heterogeneity of assumptions with regard to (1) definition of sectors, (2) estimation procedure, and (3) base time period selected. Because of close coordination and similarity of research interests between Professor William E. Martin (University of Arizona) and the junior author, the I-O tables for California and Arizona are both for the base year 1958 and were constructed on a comparable basis. The Arizona model is reported elsewhere[1/] and the California model is discussed as one phase of this study. Transaction tables for each state are combined with appropriate trade matrices to implement the interstate matrix.

- -

1/ Tijoriwala, Anilkumar G., William E. Martin, and L. Bower, *The Structure of Arizona Economy: Output Interrelationships and Their Effects on Water and Labor Requirements. Part I: The Input-Output Model and Its Interpretation and Part II: Statistical Supplement*, Tucson: University of Arizona, Agricultural Experiment Station, May 1966, unpublished.

THEORETICAL MODELS

Single-State Model

The matrix representing sales and purchases for the respective state economies is shown in (1).[1/]

(1) $$X_i = \sum_j X_{ij} + Y_i$$

where X_i is the gross output of sector i,

X_{ij} is output of sector i purchased by another producing sector j within the state (i, j = 1, 2, . . ., n), and

Y_i is final demand for sector i. This represents output of sector i purchased by the final consumer within the state, inventory additions or depletions, government purchases, and exports out of the state.

The basic assumption made in input-output analysis involves the relationship between purchases of a sector and the level of output of that sector. That is,

(2) $$X_{ij} = a_{ij}X_j + \bar{c}_{ij}$$

where

a_{ij} and $\bar{c}_{ij}$ are parameters. In most empirical work and in this study the intercept $\bar{c}_{ij}$ is assumed to be zero.

1/ For a more complete discussion of the basic state models, see Martin, William E., and Harold O. Carter, *A California Interindustry Analysis Emphasizing Agriculture, Part I: Input-Output Models and Results. Part II: Statistical Supplement*, Berkeley: University of California, Agricultural Experiment Station, Giannini Foundation Research Report No. 250, February 1962, 79 pp. and 121 pp.; and Tijoriwala, Anilkumar G., William E. Martin, and L. Bower, *The Structure of Arizona Economy: Output Interrelationships and Their Effects on Water and Labor Requirements. Part I: The Input-Output Model and Its Interpretation and Part II: Statistical Supplement*, Tucson: University of Arizona, Agricultural Experiment Station, May 1966, unpublished.

Substituting (2) into (1) gives

$$(3) \qquad X_i = \sum_j a_{ij}X_j + Y_i$$

or more compactly,

$$(4) \qquad (I - A)X = Y.$$

The (I - A) is the "Leontief matrix" which has the special properties that its diagonal elements are positive and the off-diagonal elements are negative or zero.[1/] The solution of Equation (4) is given in Equation (5).

$$(5) \qquad X = (I - A)^{-1}Y.$$

The coefficients of $(I - A)^{-1}$, also called interdependency coefficients, indicate the amount of production for each sector i necessary to sustain a final demand of one unit in sector j.

Two-State Model

The two-state economies are each divided into n sectors and a model similar to that proposed by Isard[2/] and used by Wonnacott[3/] is adopted which shows the flow of output from each sector to every sector in the two-state economies.

We adopt the following notation:

x_{ij}^{cc} = Value of output in California sector i consumed by California sector j.

1/ It can be demonstrated that the Leontief matrix is nonsingular and nonnegative which insures that for all nonnegative Y's, the solution of Equation (5) for all X_i will be nonnegative and unique. See Dorfman, Robert, Paul A. Samuelson, and Robert M. Solow, *Linear Programming and Economic Analysis*, New York: McGraw Hill Book Company, Inc., pp. 499-501.

2/ Isard, Walter, "Interregional and Regional Input-Output Analysis: A Model of a Space Economy," *Review of Economics and Statistics*, Volume 33, November 1951, pp. 218-328.

3/ Wonnacott, R. J., *Canadian-American Dependence, An Interindustry Analysis of Production and Prices*, Amsterdam: North-Holland Publishing Company, 1961.

x_{ij}^{aa} = Value of output in Arizona sector i consumed by Arizona sector j.

t_{ij}^{ca} = Value of output in California sector i consumed by Arizona sector j.

t_{ij}^{ac} = Value of output in Arizona sector i consumed by California sector j.

y_i^{cc} = Value of output in California sector i consumed by California final demand sectors.

y_i^{aa} = Value of output in Arizona sector i consumed by Arizona final demand sectors.

y_i^{ca} = Value of output in California sector i consumed by Arizona final demand sectors.

y_i^{ac} = Value of output in Arizona sector i consumed by California final demand sectors.

P_j^c = Primary inputs or value added in California sector j.

P_j^a = Primary inputs or value added in Arizona sector j.

The flow of output from each sector to every other sector in the two regions is depicted in Table 1.

The gross output column is obtained by summing across rows. For example, the gross outputs of California sector i and Arizona sector i are given by Equations (6a) and (6b) respectively.

(6a) $$X_i^c = \sum_j x_{ij}^{cc} + \sum_j t_{ij}^{ca} + y_i^{cc} + y_i^{ca}$$

(6b) $$X_i^a = \sum_j x_{ij}^{aa} + \sum_j t_{ij}^{ca} + y_i^{aa} + y_i^{ac}$$

The gross outlays for California and Arizona sector j are given by Equations (7a) and (7b) respectively.

(7a) $$X_j^c = \sum_i x_{ij}^{cc} + \sum_i t_{ij}^{ac} + P_j^c$$

TABLE 1

Interindustry Flow Table for California and Arizona

Producing sectors		California consuming sectors 1	2	...	n	Arizona consuming sectors 1	2	...	n	Final demand California	Final demand Arizona	Gross output
California	1	x_{11}^{cc}	x_{12}^{cc}	...	x_{1n}^{cc}	t_{11}^{ca}	t_{12}^{ca}	...	t_{1n}^{ca}	y_1^{cc}	y_1^{ca}	X_1^{c}
	2	x_{21}^{cc}	x_{22}^{cc}	...	x_{2n}^{cc}	t_{21}^{ca}	t_{22}^{ca}	...	t_{2n}^{ca}	y_2^{cc}	y_2^{ca}	X_2^{c}
	.									.	.	.
	.		I				II			.	V	.
	.									.	.	.
	n	x_{n1}^{cc}	x_{n2}^{cc}	...	x_{nn}^{cc}	t_{n1}^{ca}	t_{n2}^{ca}	...	t_{nn}^{ca}	y_n^{cc}	y_n^{ca}	X_n^{c}
Arizona	1	t_{11}^{ac}	t_{12}^{ac}	...	t_{1n}^{ac}	x_{11}^{aa}	x_{12}^{aa}	...	x_{1n}^{aa}	y_1^{lac}	y_1^{aa}	X_1^{a}
	2	t_{21}^{ac}	t_{22}^{ac}	...	t_{2n}^{ac}	x_{21}^{aa}	x_{12}^{aa}	...	x_{2n}^{aa}	y_2^{ac}	y_2^{aa}	X_2^{a}
	.									.	.	.
	.		III				IV			.	VI	.
	.									.	.	.
	n	t_{n1}^{ac}	t_{n2}^{ac}	...	t_{nn}^{ac}	x_{n1}^{aa}	x_{n2}^{aa}	...	x_{nn}^{aa}	y_n^{ac}	y_n^{aa}	X_n^{a}
Primary inputs (value added)		P_1^{c}	P_2^{c}	...	P_n^{c}	P_1^{a}	P_2^{a}	...	P_n^{a}			

(7b) $$X_j^a = \sum_i x_{ij}^{aa} + \sum_i t_{ij}^{ca} + P_i^a$$

If we denote the California and Arizona outputs of sector i as X_i^c and X_i^a respectively, both expressed in value terms, and let $y_i^{c+a} = y_i^{cc} + y_i^{ca}$, and $y_i^{a+c} = y_i^{aa} + y_i^{ac}$, then the two-state transactions may be abbreviated with sub-matrices as in Equation (8).

(8) $$\begin{bmatrix} X^c \\ \hline X^a \end{bmatrix} = \left[\begin{array}{c|c} X^{cc} & t^{ca} \\ \hline t^{ac} & X^{aa} \end{array}\right] + \begin{bmatrix} y^{c+a} \\ \hline Y^{a+c} \end{bmatrix}$$

Expressing each input of a sector as a proportion of the total output of that sector we obtain

(9a) $a_{ij}^c = x_{ij}^{cc}/X_j^c$ (technical coefficients for California economy)

(9b) $m_{ij}^c = t_{ij}^{ac}/X_j^c$ (gross import coefficients for California economy)

(9c) $a_{ij}^a = x_{ij}^{aa}/X_j^a$ (technical coefficients for Arizona economy)

(9d) $m_{ij}^a = t_{ij}^{ca}/X_j^a$ (gross import coefficients for Arizona economy)

where

$(i, j = 1, 2, \ldots, n)$ and both a_{ij}'s and m_{ij}'s are elements of n-order matrices of technical and trade coefficients, respectively.[1/]

1/ The A and the M matrices (technical coefficients and trade coefficients matrices respectively) are not necessarily of the same order. The generality of the theory holds in cases where the regional I-O tables concerned are of different dimensions, since the resulting partitioned matrix will always be square and the inverse (if it exists) can always be found. For example, if the A matrix for California was n x n, and that for Arizona was k x k, then the two M matrices would be k x n and n x k respectively, and the resulting two-state matrix would be square with dimensions (n+k) x (n+k).

Substituting Equations (9a-9d) into Equation (8) and rearranging terms gives

$$\text{(10)} \qquad \left[\begin{array}{c|c} I - A^c & -M^a \\ \hline -M^c & I - A^a \end{array}\right] \left[\begin{array}{c} X^c \\ \hline X^a \end{array}\right] = \left[\begin{array}{c} Y^{c+a} \\ \hline Y^{a+c} \end{array}\right]$$

In this case, the coefficients of the "Leontief matrix" may be interpreted as constant production and trade relationships which describe the economic structure of the two-state economy for a given point in time.

Solving for X^c and X^a in terms of any final bill of goods yields

$$\text{(11a)} \qquad \left[\begin{array}{c} X^c \\ \hline X^a \end{array}\right] = \left[\begin{array}{c|c} I - A^c & -M^a \\ \hline -M^c & I - A^a \end{array}\right]^{-1} \left[\begin{array}{c} y^{c+a} \\ \hline y^{a+c} \end{array}\right]$$

in which the output of any sector in the two states is expressed as a function of final demand for products in the two states.

Equation (11a) may be written as

$$\text{(11b)} \qquad \left[\begin{array}{c} X^c \\ \hline X^a \end{array}\right] = \left[\begin{array}{c|c} A^{*c} & M^{*a} \\ \hline M^{*c} & A^{*a} \end{array}\right] \left[\begin{array}{c} y^{c+a} \\ \hline y^{a+c} \end{array}\right] \quad \text{or}$$

$$\text{(11c)} \qquad X = N^* Y$$

Introduction of Water into the Two-State Model

Direct and Indirect Water Requirements

The inverse matrix in Equation (11c) indicates explicitly that demand for products of any sector in either state may induce production directly within that sector and also indirectly from other sectors in both states. By combining water usage data with information contained in the matrix N^*, it is possible to trace and quantify water interdependencies and thus reveal

the local and regional effects on water withdrawal of a change in final demand in any one sector.

First, we define technical water-use coefficients as the ratio of water requirements (r_j) in a given sector to the gross output of that sector (X_j) as given in Equations (12a) and (12b).

(12a) $$F_j^c = r_j^c / X_j^c, \; j = 1 \ldots n,$$

(12b) $$F_j^a = r_j^a / X_j^a, \; j = 1 \ldots n.$$

The total water required (R) by the endogenous sectors is given by

(13) $$R = FX$$

where

F is a partitioned row vector $[F^c : F^a]$ and X is as defined previously.

Substituting the solution for X from Equation (11b) into Equation (13) yields

(14a) $$R = [F^c : F^a] \left[\begin{array}{c|c} A^{*c} & M^{*a} \\ \hline M^{*c} & A^{*a} \end{array}\right] \left[\begin{array}{c} y^{c+a} \\ \hline y^{a+c} \end{array}\right]$$

or more compactly

(14b) $$R = FN^*Y.$$

If we let $FN^* = V^*$, where V^* is a 1 x 2n partitioned row vector $[V^c : V^a]$ with elements V_j, then for each dollar of final demand for products of sector j (say) in California, V_j^c units of water are required directly for products of sector j and indirectly through requirements induced in other sectors of the California economy <u>as well</u> as those induced in sectors of the Arizona economy.

A disaggregation of V^* is accomplished by premultiplying N^* with a new matrix $\bar{F}$ containing two n-order block diagonal matrices of technical water

coefficients with typical elements $\bar{F}^c_{jj} = F^c_j$ and $\bar{F}^a_{jj} = F^a_j$. The resulting "water interdependency matrix" W^* is shown in Equation (15).

$$(15) \qquad W^* = \left[\begin{array}{c|c} \bar{F}^c & 0 \\ \hline 0 & \bar{F}^a \end{array}\right] \left[\begin{array}{c|c} A^{*c} & M^{*a} \\ \hline M^{*c} & A^{*a} \end{array}\right] = \left[\begin{array}{c|c} \bar{F}^c A^{*c} & \bar{F}^c M^{*a} \\ \hline \bar{F}^a M^{*c} & \bar{F}^a A^{*a} \end{array}\right]$$

$$= \left[\begin{array}{c|c} W^{cc} & W^{ca} \\ \hline W^{ac} & W^{aa} \end{array}\right]$$

W^{cc} and W^{aa} are each n x n matrices of intrastate direct plus indirect water requirements for California and Arizona economies, respectively. W^{ca} and W^{ac} are also n-order matrices of embodied, direct plus indirect, water transfers from California to Arizona and Arizona to California, respectively. Each coefficient in W^* relates to a unit change in final demand.

Note that $[1]\ W^* = V^*$, where [1] is a row sum vector (1 x 2n). Similarly, summing down the columns of the submatrices of W^* provides a basis for estimating individual state water requirements induced by a unit final demand change in each of the two states. Thus, we define for California the 1 x n row vector V^{cc} as

$$(16) \qquad V^{cc} = [1]\ W^{cc}$$

with elements V^{cc}_j, then for a unit change in final demand for products of sector j of California, V^{cc}_j units of water are required directly and indirectly from California. Following the same procedure,

$$(17) \qquad V^{ac} = [1]\ W^{ac},$$

$$(18) \qquad V^{ca} = [1]\ W^{ca}, \text{ and}$$

$$(19) \qquad V^{aa} = [1]\ W^{aa}.$$

By definition, then

$$(20) \qquad V^* = [V^{cc} + V^{ac} : V^{aa} + V^{ca}].$$

Water Multipliers

Multipliers derived from I-O matrices are defined in various ways in the literature. In this study, we define unweighted water multipliers $[\bar{W}]$ for the n sectors in each of the two states as the column sums of the $[W^*]$ (the elements of V^*) divided by the corresponding technical water intake coefficients. Thus, in terms of previous notation

$$\bar{W} = [\bar{F}^{-1}]\ [V^{*T}] = [\bar{W}^c : \bar{W}^a], \text{ where T is transpose.} \tag{21}$$

It should be emphasized that the unweighted water multipliers of Equation (21) are merely ratios or indexes of interdependency which say little about absolute water requirements by various sectors nor do they reflect the relative "sizes" of different sectors which may differ considerably. To reveal the impact on water use in relation to the relative sizes of different sectors, weighted water multipliers are defined in Equation (22).

$$\bar{\bar{W}} = \left[\begin{array}{c|c} \Delta y^c & 0 \\ \hline 0 & \Delta y^a \end{array}\right] \left[\begin{array}{c} V^c \\ \hline V^a \end{array}\right] = \left[\begin{array}{c} \bar{\bar{W}}^c \\ \hline \bar{\bar{W}}^a \end{array}\right], \text{ or} \tag{22a}$$

$$\bar{\bar{W}} = [\overline{\Delta y}]\ V^{*T}. \tag{22b}$$

Δy^c and Δy^a are each n-order diagonal matrices with typical elements Δy^c_{jj} and Δy^a_{jj} representing a uniform change in existing final demand for each California and Arizona sector j, respectively.

Possible Sources of Bias

Aside from the usual sources of bias inherent in any regional I-O model, one additional restrictive assumption that should be noted relates to sector capacities. Using the inverse (N^*) to compute V^*, W^*, $\bar{W}$, and $\bar{\bar{W}}$, implicitly assumes that all sectors are operating at or below their respective capacities.

However, if at least one sector in either California or Arizona had inadequate capacity to meet the implied output necessary to supply the delivery of

a given level of final demand, then the resulting inverse $[N^*]$ would be inconsistent with the feasible bill of goods and the resulting water coefficients and multipliers would be biased.

A method for overcoming the capacity problem was suggested by Leon N. Moses[1/] and implemented by Hollis B. Chenery[2/] and Ronald J. Wonnacott in his Canadian-American dependence model.[3/] Moses suggested the following steps: (1) Compute output for all industries necessary to support the delivery of a given final demand. (2) Compare the required level of output and regional capacity for each sector in each region individually. (3) If in one or more sectors required output is greater than capacity, a choice is implied between building new capacity or increasing imports. Whether a region becomes a deficit area by increasing imports or makes a readjustment by building new capacity depends on the cost comparisons, not only in the deficit industries but in all industries in the region. In either case a different W^* matrix and a different set of water multipliers is generated.

Chenery has utilized an interregional input-output framework which takes capacity limitations into account. His model is solved in an iterative way. The major drawback of this method is that a new set of computations is required for any other particular bill of goods, i.e., the system does not offer a unique inverse applicable to any bill of goods. Wonnacott, on the other hand, has formulated and implemented an interindustry model of the Canadian-American dependence which gives a "general set" of inverses for any bill of goods and is a feasible method for problems with capacity restrictions for a "small" number of sectors.

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1/ Moses, Leon N., a discussion of the paper by Moore, F. T., "Regional Economic Reaction Paths," *American Economic Review* (proceedings) 45:2, 1955, pp. 133-156.

2/ Chenery, Hollis B., "Interregional and International Input-Output Analysis," in Tibor Barna, ed., *Structural Interdependence of the Economy*, New York: John Wiley and Sons, 1954, Chapter 17.

3/ Wonnacott, R. J., *Canadian-American Dependence, An Interindustry Analysis of Production and Prices*, Amsterdam: North-Holland Publishing Company, 1961, pp. 33-66.

SECTOR DEFINITIONS AND CLASSIFICATIONS

The input-output tables for California and Arizona are both for the base year 1958 and were constructed on a comparable basis with respect to sector definitions, aggregations, and general estimation procedures. In a few cases where differences in either definitions, aggregations, or general estimating procedures existed, a reconciliation was made so that the two models were essentially comparable. Also, sector definitions for both California and Arizona tables are comparable to the 1954 Martin-Carter study.[1/]

Endogenous Sector Classification

The 26 endogenous sectors of the California and Arizona models are each composed of 10 agricultural sectors, 5 agricultural processing sectors, 7 manufacturing and mining sectors, 3 service sectors, and 1 sector including all of the "margin" (wholesale and retail trade and transportation) industries.

Agriculture and mining sectors are classified on a product rather than an establishment basis to conform to most data sources. Processing, manufacturing, and some transportation industries are classified on an establishment basis to conform to practices followed in constructing national I-O tables by the Office of Business Economics, Department of Commerce.

The definitions of the commodities or industries included in each endogenous sector are given as follows:

1. Meat Animals and Products--beef, hogs, sheep and lambs, wool and mohair.
2. Poultry and Eggs--chickens, eggs, broilers, turkeys and turkey eggs, other poultry and eggs, and hatcheries.
3. Farm Dairy Products--milk, cream, and dairy animals sold for meat.

1/ For a discussion of general estimation procedures and statistical details on the California model see Appendix A. For similar discussion on the Arizona table see Tijoriwala, Anilkuma G., William E. Martin, and L. Bower, *The Structure of Arizona Economy: Output Interrelationships and Their Effects on Water and Labor Requirements. Part I: The Input-Output Model and Its Interpretation and Part II: Statistical Supplement*, Tucson: University of Arizona, Agricultural Experiment Station, May 1966, unpublished.

4. Food and Feed Grains--wheat, rye, rice, corn, barley, oats, sorghum, corn, and sorghum silage.

5. Cotton--cotton lint and cottonseed.

6. Vegetables--Irish potatoes, sweet potatoes, melons, dry beans and peas, strawberries, and all other vegetables.

7. Fruit (excluding citrus) and Tree Nuts--apples, apricots, cherries, nectarines, peaches, pears, persimmons, plums, prunes, pomegranates, avocados, dates, figs, olives, grapes, tree nuts, and bush berries.

8. Citrus Fruits--oranges, tangerines, lemons, grapefruit, limes, and satsumas.

9. Forage Crops--hay and pasture.

10. Miscellaneous Agriculture--legume and grass seed, vegetable seeds, greenhouse and nursery products, on-farm forest products, sugar beets, oil crops, miscellaneous crops, horses and mules, honey and beeswax, agricultural services, and hunting and fishing.

11. Grain Mill Products--flour and meal, cereal breakfast foods, rice milling, blended and prepared flour, and prepared animal feeds.

12. Meat and Poultry Processing--meat packing, prepared meats, and poultry dressing plants.

13. Dairy Products--creamery butter, natural cheese, concentrated milk, ice cream and ices, special dairy products, and fluid milk.

14. Canning, Preserving, and Freezing--canned seafood, cured fish, canning and preserving food, dehydrated fruits and vegetables, pickles and sauces, packaged seafood, and frozen fruit and vegetables.

15. Miscellaneous Agricultural Processing--bakery products (including bread baked at single retail outlets), sugar, miscellaneous food preparations, alcoholic beverages, and tobacco products.

16. Chemicals and Fertilizers--chemicals, plastics, synthetic rubber, explosives, drugs and medicines, soap and related products, paints and varnishes, fertilizers, and animal and vegetable oils.

17. Petroleum--crude petroleum and natural gas, petroleum products, coke and products, and paving and roofing materials.

18. Fabricated Metals and Machinery--fabricated metals, machinery, electrical machinery, and transportation equipment (excluding aircraft).

19. Aircraft--aircraft and parts.

20. Primary Metals--steel, foundries and forgings, nonferrous metals, and nonferrous foundries.

21. Other Manufacturing--textiles, logging, wood products, furniture, paper products, printing and publishing, rubber products, leather products, and clay and glass products.

22. Mining--all mining except for liquids and gases.

23. Utilities--electric light and power; natural, manufactured, and liquified petroleum gas; and telephone and telegraph.

24. Selected Services--eating and drinking establishments, hotels and camps, laundries and dry cleaners, other personal services, business services, auto repair shops and garages, other repair services, and motion picture theaters and other amusements.

25. Trade and Transportation--railroads, trucking, warehousing and storage, water transportation, air transportation, pipeline transportation, and wholesale and retail trade.

26. Unallocated services--banking and finance, real estate and rentals, medical and dental, nonprofit institutions (including education), advertising, small arms production, and motion picture production.

Exogenous Sectors

The endogenous section of the model is constructed symmetrically, i.e., each sector has both an output row and an input column. In contrast, there are five rows and ten columns in the exogenous portion of the California and Arizona models. The gross private capital accumulation sector, for example, is aggregated with the value-added row, yet appears as a separate column. For these reasons, the exogenous sectors are discussed in greater detail than are the endogenous sectors. Additional detail is presented in Appendix A.

Sector 27, scrap and by-products.--Commodities considered as scrap or by-products and produced by the 26 endogenous sectors are distributed to a special "dummy" sector outside the endogenous system. These commodities are then distributed to the using sector from a scrap and by-products row. Some of the main commodities considered as by-products in this study are farm hides, dairy culls, cottonseed, grain mill cleanings and sweepings, brewers' and distillers' dried grains, vegetable cake and meal, animal oils, packers' hides, molasses, cotton linters, coke oven gas, gold and silver from the primary metals industries, and blast furnace gas. In addition, the value of metal and nonmetal wastes was estimated without specifying particular commodities.

Sector 28, net imports and net exports.[1/]--To construct a state I-O model requires, ideally, detailed import-export data by type and value of product. Such information is extremely limited. In the absence of adequate import-export data, the procedure followed for the individual state models was to

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1/ Discussion of the procedures for fusion of the two state economies is presented in Appendix A.

specify the total amount of each product used in the state by both producers and consumers, compare the total with the total output produced in the state, and label the difference as either a net import or export. The imports and exports of the state models are therefore net relationships, any counterbalancing commodity flows across the state line within the same aggregate sector are ignored.

With imports recorded as a net relationship and no information as to whether a particular industry uses domestically produced or imported inputs, a further assumption was necessary in order to scale the distribution of inputs from a sector down to domestically produced goods only. It was assumed that each sector imported a particular class of goods in proportion to its relative use of that good. For example, if agriculture used 6 percent; nonagricultural industry, 71 percent; and final demand, 23 percent of the total value of chemicals and fertilizers consumed in the state, these sectors divided the value of imports in the same proportions. Conversely, available domestic output was distributed in the same proportions.

Therefore, technical coefficients of producing sectors for individual state models express the amount of a domestically (in-state) produced good required to produce one dollar of a sector's output. Technical coefficients of the import sector express the value of all imports required to produce one dollar of a sector's output. All imports into the state are aggregated and appear in the single net import row. Neither the sum of the net import row nor the sum of the net export column has any comparability to published trade data. Since imports and exports are recorded on a net basis, the sums are functions of the particular aggregation used.[1/]

Sector 29, maintenance construction.--Output includes the value of all maintenance work done on force account[2/] in addition to that done by construction contractors.

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1/ The difference between total net imports and total net exports might be termed California's balance of trade. Note, however, that net exports include most purchases by the Federal Government whether physically exported or not.

2/ Force account construction, in contrast to contract construction, is performed by the purchasing industries' own employees.

Sector 30, new construction.--Output includes force account work as well as construction by contractors. Construction is defined as the design and erection of immobile structures and utilities, together with those service facilities which become an integral part of that structure. Oil well drilling is included.

Sector 31, state and local government.--Outputs are the services rendered by state, county, city, special district, and school districts as measured by the amount of taxes paid by each sector of the economy. Note that taxes are considered government output rather than as inputs to government. Sectors "buy" services by paying taxes. Inputs to government are the purchases of government from other sectors.

Sector 32, Federal Government.--Output is the service rendered by the Federal Government as measured by the amount of taxes paid by each sector of the economy. Inputs are Federal Government purchases.

Government purchases of California products could not be estimated except for sectors whose output is mostly consumed in the region where produced. For other sectors, Federal Government purchases were ignored and are thus included in the net export sector. Since both net exports and Federal Government are a part of final demand, the usefulness of the model is not appreciably affected by this procedure.

Sectors 33 and 34, inventory change.--These two sectors, inventory addition and inventory depletion, are included to reconcile current production with current consumption. All inventories are assumed to be held by the producing sector. For the manufacturing and processing industries, where specific data were not available, California was assumed to contribute its share to inventory change, as measured by the California and Arizona sector's production relative to the United States sector's production.

Sector 35, gross private capital formation.--Capital items, such as machinery and new construction purchased by the private sectors of the economy, are considered to be purchased by this "dummy" sector. Depreciation is then distributed to the using sector through the household sector.

Sector 36, households.--Inputs to this sector are expenditures for goods and services by private individuals. The sum of all inputs (excluding taxes) approximates "personal consumption expenditure" as estimated in the national

income accounts of the Department of Commerce. Household flows to other sectors are wages and salaries, proprietors' income, depreciation, and interest.

EMPIRICAL RESULTS

The resulting transaction tables, technical coefficient matrix, and interdependency matrixes (inverse) for the (1) California model (1958) and (2) California-Arizona model (1958) are presented herein.[1/]

The California Model

Transaction Table

Table 2 summarizes the interindustry flows of goods and services within, to, and from California in 1958 by sector of origin and destination and represents the counterpart of Equation (1).

The entries in each row of Table 2 list in producers' prices the dollar amount of a California sector's output purchased by each sector in the economy. For example (reading across the first row) sector 1, meat animals and products, sold $452,644,000 of products to meat and poultry processing (column 12) and $67,000 of products to the "other manufacturing" sector (column 21). Continuing to read across row 1 to the final demand columns shows that $212,000 of output was distributed to scrap and by-products (column 27). $19,669 of output went into inventory addition (column 33)--indicating increased breeding stock. The households sector (column 36, 37) purchased $3,320,000 of meat animals. This portion of output presumably did not pass through the market but represents only meat products slaughtered and consumed on farms. Most meat animals and products flow through the processing sector (sector 12) before reaching the final consumer. The final column lists gross domestic output (GDO) of the sector ($475,912,000). Other rows have analogous interpretations.

Each column of Table 2 represents for the designated sector its total purchases from other sectors. Consider the poultry and egg sector (sector 2) as an illustration. This sector purchases $57,836,000 of products from "itself"

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1/ Corresponding results for the North-South California model are presented in Appendix B.

TABLE 2

Interindustry Flows of Goods and Services by Sector of Origin and Destination, California Economy, 195[illegible] a/

Sector number	Sector title	1 Meat animals	2 Poultry and eggs	3 Farm dairy prod.	4 Grains	5 Cotton	6 Veg.	7 Fruit and nuts	8 Citrus	9 Forage	10 Misc. agri.	11 Grain mill prod.	12 Meat & poultry proc.	13 Dairy prod.	14 Canning, preserving, freezing	15 Misc. agri. proc.	16 Chem. and fert.	17 Petroleum	18 Fab. metals & mach.	19 Air craft	Sector number
		thousand dollars																			
1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	0.	-0.	-0.	452644.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1
2	Poultry and eggs	-0.	57836.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	62919.	33.	6.	2634.	-0.	-0.	-0.	-0.	2
3	Farm dairy products	-0.	-0.	10401.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	319831.	-0.	-0.	-0.	-0.	-0.	-0.	3
4	Food and feed grains	28412.	26445.	18710.	6948.	-0.	-0.	-0.	-0.	-0.	479.	87879.	-0.	-0.	-0.	4967.	-0.	-0.	-0.	-0.	4
5	Cotton	-0.	-0.	-0.	-0.	897.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5
6	Vegetables	-0.	-0.	-0.	-0.	-0.	1783.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	171683.	-0.	-0.	-0.	-0.	-0.	6
7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	268344.	46259.	180.	-0.	-0.	-0.	7
8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	0.	-0.	15616.	-0.	-0.	-0.	-0.	-0.	8
9	Forage	28703.	-0.	21447.	-0.	-0.	-0.	-0.	-0.	-0.	5909.	5068.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	9
10	Miscellaneous agriculture	2000.	-0.	2310.	7467.	37754.	31280.	11697.	3888.	8221.	12725.	-0.	50.	-0.	56768.	48252.	10954.	-0.	-0.	-0.	10
11	Grain mill products	35517.	88135.	32456.	-0.	-0.	-0.	-0.	-0.	-0.	384.	4808.	-0.	305.	6268.	60810.	2299.	-0.	-0.	-0.	11
12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	785.	46273.	-0.	10425.	17681.	3073.	-0.	-0.	-0.	12
13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1438.	3233.	61815.	9938.	7961.	988.	-0.	-0.	-0.	13
14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	25403.	4811.	516.	-0.	-0.	-0.	14
15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	23020.	-0.	48787.	75014.	132756.	40324.	868.	39.	-0.	15
16	Chemicals and fertilizers	810.	965.	332.	7587.	7336.	20750.	22840.	5378.	4733.	3994.	10875.	3300.	15149.	25460.	33708.	285841.	61937.	39272.	5066.	16
17	Petroleum	381.	3067.	158.	8116.	3420.	10634.	12792.	2454.	5039.	3280.	1046.	2444.	1752.	9153.	-0.	-0.	1431437.	17018.	4848.	17
18	Fabricated metals and machinery	5874.	4317.	4273.	13949.	5015.	16695.	18755.	3781.	9391.	5672.	3466.	5985.	4629.	170714.	34019.	26223.	57208.	832824.	188945.	18
19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	67.	-0.	24464.	719662.	19
20	Primary metals	38.	25.	20.	8.	8.	32.	32.	4.	9.	9.	-0.	23.	16.	1547.	1103.	10537.	944.	531734.	78933.	20
21	Other manufacturing	1445.	1860.	1146.	1233.	915.	12936.	11302.	2727.	791.	2043.	15232.	4519.	25719.	81586.	31588.	40448.	15191.	150112.	47601.	21
22	Mining	-0.	-0.	-0.	15.	8.	58.	26.	7.	10.	19.	1000.	564.	697.	1452.	1325.	11979.	39473.	3283.	412.	22
23	Utilities	2572.	2190.	2434.	949.	1644.	3672.	4082.	954.	727.	2991.	1601.	5900.	4748.	10312.	9684.	17708.	35355.	35607.	16279.	23
24	Selected services	2476.	1687.	1166.	2423.	1339.	4599.	4959.	1041.	1643.	1720.	1320.	37616.	6934.	8256.	8592.	11731.	9147.	13644.	3888.	24
25	Trade and transportation	19337.	20810.	25137.	7203.	5504.	11712.	9989.	2287.	4482.	6219.	20796.	63772.	65552.	136503.	382674.	140134.	147336.	248824.	55958.	25
26	Unallocated	10467.	5760.	9080.	16274.	19502.	21172.	11869.	2635.	9383.	9629.	10742.	64929.	31850.	69130.	107545.	100593.	288415.	211680.	38498.	26
27	Scrap and by-products	13782.	14306.	5771.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	7423.	55425.	26766.	48187.	69277.	1202.	13194.	6597.	1005.	27
28	Net imports	219308.	81983.	54734.	13620.	7907.	25471.	25704.	5836.	7548.	7429.	62692.	250585.	41478.	167139.	146645.	183180.	94586.	859143.	172934.	28
29	Maintenance construction	5806.	4281.	4126.	3937.	3390.	7798.	10470.	2283.	2678.	3490.	1029.	14.	3195.	7924.	7906.	2299.	3860.	6009.	3973.	29
30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	30
	Households and government	28984.	12368.	129338.	89301.	205630.	379958.	261084.	125550.	151913.	276319.	180500.	171455.	108221.	246277.	707496.	547001.	957466.	2022872.	2231017.	
	GROSS OUTLAY	475912.	326035.	195589.	177030.	300069.	548150.	405601.	158825.	206568.	342311.	440725.	1231630.	769477.	1623105.	1869688.	1437277.	3156417.	5003122.	3569019.	0.0.

TABLE 2 continued

Sector number	Sector title	20 Primary metals	21 Other mfg	22 Mining	23 Utilities	24 Selected services	25 Trade and trans.	26 Unallocated	27 Scrap and by-prod	28 Net exports	29 Maint constr.	30 New constr.	31 State & local gov.	32 Federal gov.	33 Inventory addit'n	34 Inventory deplet'n	35 Gross pri. cap. form.	36-37 All households	GROSS DOMESTIC OUTPUT b/	Sector number
		thousand dollars																		
1	Meat animals and products	-0.	67.	-0.	-0.	-0.	-0.	-0.	212.	-0.	-0.	-0.	-0.	-0.	19669.	-0.	-0.	3320.	475912.	1
2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1243.	-0.	-0.	201384.	326035.	2
3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	51465.	-0.	-0.	-0.	-0.	-0.	2928.	-0.	-0.	10964.	195589.	3
4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5190.	-0.	-0.	-0.	177030.	4
5	Cotton	-0.	670.	-0.	-0.	-0.	-0.	-0.	26211.	284242.	-0.	-0.	-0.	-0.	-0.	-11751.	-0.	-0.	300069.	5
6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	2475.	126436.	-0.	-0.	-0.	2756.	69.	-0.	-0.	242948.	548150.	6
7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	56447.	-0.	-0.	-0.	-0.	-0.	-706.	-0.	35077.	405601.	7
8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	104469.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	38740.	158825.	8
9	Forage	-0.	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3441.	-0.	-0.	-0.	206568.	9
10	Miscellaneous agriculture	-0.	3732.	-0.	-0.	-0.	-0.	-0.	-0.	50105.	-0.	-0.	-0.	-0.	-0.	-1985.	-0.	56493.	342311.	10
11	Grain mill products	-0.	15.	-0.	-0.	-0.	198.	128.	2583.	-0.	-0.	-0.	1933.	-0.	1760.	-0.	-0.	203128.	440725.	11
12	Meat and poultry processing	-0.	1879.	-0.	-0.	158.	2306.	35289.	15488.	-0.	-0.	1818.	6420.	-0.	4904.	-0.	-0.	1083131.	1231630.	12
13	Dairy products	-0.	126.	-0.	-0.	106.	1566.	969.	-0.	-0.	-0.	-0.	5807.	-0.	3064.	-0.	-0.	672466.	769477.	13
14	Canning, preserving, freezing	-0.	139.	-0.	-9.	77.	1164.	741.	-0.	1094031.	-0.	-0.	12436.	-0.	6482.	-0.	-0.	475325.	1623105.	14
15	Miscellaneous agri. processing	191.	1621.	2.	2.	139.	1196.	8431.	8329.	-0.	-0.	-0.	10598.	-0.	7051.	-0.	-0.	1511322.	1869688.	15
16	Chemicals and fertilizers	11431.	163245.	4682.	471.	17310.	5603.	49668.	24284.	-0.	93217.	51374.	53937.	-0.	102.	-0.	-0.	406620.	1437277.	16
17	Petroleum	7388.	24603.	6967.	15578.	21510.	183465.	49698.	3186.	393543.	46258.	113091.	59504.	-0.	-0.	-26712.	-0.	739299.	3156417.	17
18	Fabricated metals and machinery	47231.	127697.	15152.	14774.	142163.	60941.	125501.	70288.	-0.	122006.	736102.	128791.	-0.	-0.	-73152.	940959.	1133144.	5003122.	18
19	Aircraft and parts	81.	3971.	-0.	-0.	501863.	22140.	136615.	39386.	2074241.	-0.	-0.	-0.	-0.	-0.	-6534.	47619.	4539.	3569019.	19
20	Primary metals	193444.	69783.	6899.	1593.	573.	4475.	16597.	34552.	-0.	44160.	228630.	-0.	-0.	-0.	-9122.	-0.	1432.	1222035.	20
21	Other manufacturing	17177.	981267.	13541.	43098.	133659.	109344.	504302.	35937.	-0.	101274.	660438.	88186.	-0.	-0.	-1262.	93024.	1809438.	5037409.	21
22	Mining	111675.	52688.	34054.	128.	783.	2665.	15999.	-0.	42593.	18510.	8203.	21803.	-0.	-0.	-2841.	-0.	28434.	395022.	22
23	Utilities	25665.	57987.	8464.	325422.	46224.	240093.	206122.	-0.	-0.	3991.	22641.	95420.	41423.	-0.	-0.	24720.	971255.	2222818.	23
24	Selected services	4750.	26423.	706.	2890.	263031.	205750.	200739.	-0.	481913.	33140.	7235.	25054.	543903.	-0.	-0.	1129.	1891063.	3811907.	24
25	Trade and transportation	91901.	147737.	14932.	28422.	135355.	386259.	500644.	21969.	43177.	202484.	789771.	99134.	221688.	-0.	-0.	295460.	6573771.	11113333.	25
26	Unallocated	30589.	160746.	19199.	178506.	599660.	1478387.	1705134.	-0.	-0.	24143.	402675.	220479.	296422.	-0.	-0.	88513.	7609534.	13942913.	26
27	Scrap and by-products	42232.	10764.	671.	18586.	9916.	10156.	-0.	-0.	-0.	1643.	8973.	-0.	-0.	-0.	-0.	-29668.	657.	336365.	27
28	Net imports	178033.	253716.	24639.	122566.	210314.	289338.	593411.	-0.	-0.	181093.	912728.	175094.	37684.	-0.	-0.	474136.	-0.	5880674.	28
29	Maintenance construction	5486.	8355.	432.	528808.	29159.	185218.	729446.	-0.	-0.	135.	660.	580644.	118268.	-0.	-0.	-0.	4984.	2276253.	29
30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1297368.	334846.	-0.	-0.	5138191.	-0.	6570405.	30
	Households and government	454781.	2734773.	244503.	941976.	1705970.	1923378.	8973479.	-0.	-0.	1404199.	2626266.	2344707.	5653978.	-0.	-0.	-0.	-0.	43840257.	
	GROSS OUTLAY	1222035.	5037409.	395022.	2222818.	3811907.	11113333.	13942913.	336365.	4757197.	2276253.	6570405.	5029415.	7230968.	55883.	-130065.	7069083.	25708450.	119085941.	G.O.

a/ Each entry shows the value of goods and services produced by the California sector listed at the left that were purchased by the California sector listed at the top.

b/ Some column and row totals do not add up exactly due to round ng.

(row 2). This includes the value of eggs sold to hatcheries and used for on-farm hatchings, as well as the value of chicks and poults sold to farmers from hatcheries. The poultry sector's purchases of unprocessed food and feed grains amounted to $26,445,000 (row 4). Processed feeds purchased from the grain mill products sector (row 11) are $88,135,000.

Other industry purchases by the poultry and egg sector include $985,000 of chemicals and fertilizers (row 16), mainly veterinary supplies; $3,067,000 of petroleum products (row 17); $4,317,000 of fabricated metals and machinery (row 18), mainly trucks and the farm share of autos; $25,000 of primary metals (row 20); $1,860,000 of other manufactured products (row 21), mostly paper products, but also including small amounts of textile products, rubber products, miscellaneous products, and the products of the printing and publishing industries. Natural gas, electricity, and telephone utilities (row 23) purchased amounted to $2,190,000. Services purchased amounted to $1,687,000 (row 24) and the aggregate trade and transportation margin on these inputs totaled $20,810,000 (row 25). All of these inputs were produced within California. The aggregate value of net imports purchased by the poultry industry was $81,983 (row 28), most of which was processed feeds. Sector UC 2 also "purchased:" $2,222,000 of maintenance construction work and $12,368,000 of household services, including wages, salaries, proprietors' profits, depreciation, interest payments, and state and Federal Government services. Gross outlay (GO) is the total value of all inputs ($326,035,000) which is equal to the Gross Domestic Output of the poultry and egg sector. The purchases of the other sectors in 1958 may be similarly traced by examining their respective column entries.

Technical Coefficients

Table 3 shows the direct purchases of each endogenous sector from every other endogenous sector per dollar of output. All coefficients were calculated directly from Table 2. Entries in endogenous rows 1 through 26 are the a_{ij}'s of Equation 2. For example, California grown food and feed grains ($28,412,000) purchased by the meat animal and product sector (row 4, column 1 in Table 2) divided by the Gross Domestic Output of the meat animal sector ($475,912,000 shown in the last column of row 1) equals .059700 dollars (the entry in row 4, column 1 of Table 3). Entries in other rows were obtained similarly.

TABLE 3

Technical Coefficients, California Economy, 1958[a]

Sector number	Sector title	1 Meat animals	2 Poultry and eggs	3 Farm dairy prod.	4 Grains	5 Cotton	6 Veg.	7 Fruit and nuts	8 Citrus	9 Forage	10 Misc. agri.	11 Grain mill prod.	12 Meat & poultry proc.	13 Dairy prod.	14 Canning, preserving, freezing	15 Misc. agri. proc.	16 Chem. and fert.	17 Petro-leum	18 Fab. metals & mach.	19 Air-craft	Sector number
1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.367516	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	1
2	Poultry and eggs	-0.000000	0.177392	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.051086	0.000043	0.000004	0.001409	-0.000000	-0.000000	-0.000000	-0.000000	2
3	Farm dairy products	-0.000000	-0.000000	0.026292	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.415647	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	3
4	Food and feed grains	0.059700	0.081111	0.047297	0.027950	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001399	0.199396	-0.000000	-0.000000	-0.000000	0.002657	-0.000000	-0.000000	-0.000000	-0.000000	4
5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	0.002323	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	5
6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.003253	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.105774	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	6
7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.165328	0.024742	0.000125	-0.000000	-0.000000	-0.000000	7
8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.009621	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	8
9	Forage	0.207398	-0.000000	0.236222	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.017262	0.011499	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	9
10	Miscellaneous agriculture	0.004202	-0.000000	0.007356	0.042179	0.125818	0.057065	0.028839	0.024480	0.039798	0.037174	-0.000000	0.000041	-0.000000	0.034975	0.025808	0.007621	-0.000000	-0.000000	-0.000000	10
11	Grain mill products	0.074629	0.270324	0.082045	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001122	0.010909	-0.000000	0.000396	0.003862	0.032524	0.001600	-0.000000	-0.000000	-0.000000	11
12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001781	0.037571	-0.000000	0.006423	0.009457	0.002138	-0.000000	-0.000000	-0.000000	12
13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.003263	0.002625	0.080334	0.006123	0.004258	0.000687	-0.000000	-0.000000	-0.000000	13
14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.015651	0.003643	0.000359	-0.000000	-0.000000	-0.000000	14
15	Miscellaneous agri. processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.052232	-0.000000	0.063403	0.046216	0.071004	0.028056	0.000275	0.000008	-0.000000	15
16	Chemicals and fertilizers	0.001702	0.003021	0.000839	0.042857	0.074448	0.037855	0.056311	0.033861	0.022913	0.011668	0.024675	0.002679	0.019687	0.015686	0.018029	0.198877	0.019623	0.007849	0.001419	16
17	Petroleum	0.000801	0.009407	0.000399	0.045845	0.011397	0.019480	0.031538	0.015451	0.024394	0.009582	0.002373	0.001984	0.004876	0.005639	-0.000000	-0.000000	0.453501	0.003401	0.001358	17
18	Fabricated metals and machinery	0.012343	0.013241	0.010675	0.078795	0.016713	0.030457	0.046240	0.023806	0.045462	0.016570	0.007864	0.004859	0.006016	0.105177	0.018195	0.012245	0.018124	0.164461	0.052940	18
19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000047	-0.000000	0.004890	0.201641	19
20	Primary metals	0.000080	0.000077	0.000051	0.000045	0.000027	0.000058	0.000079	0.000025	0.000044	0.000026	-0.000000	0.000019	0.000021	0.000953	0.000590	0.007331	0.000299	0.106280	0.022116	20
21	Other manufacturing	0.003036	0.005705	0.002697	0.006965	0.003049	0.022870	0.027865	0.017170	0.003829	0.005968	0.034561	0.003669	0.033424	0.050265	0.016895	0.028142	0.004813	0.030004	0.013337	21
22	Mining	-0.000000	-0.000000	-0.000000	0.000085	0.000027	0.000106	0.000064	0.000044	0.000048	0.000056	0.002269	0.000458	0.000906	0.000895	0.000709	0.008335	0.012506	0.000656	0.000115	22
23	Utilities	0.005404	0.006717	0.006153	0.005361	0.005479	0.006699	0.010064	0.006007	0.003519	0.008738	0.003633	0.004790	0.006170	0.006353	0.005179	0.012321	0.011201	0.007117	0.004561	23
24	Selected services	0.005203	0.005174	0.002948	0.013687	0.004462	0.008390	0.012226	0.006554	0.007956	0.005025	0.002995	0.030542	0.009011	0.005087	0.004595	0.008162	0.002898	0.002727	0.001089	24
25	Trade and transportation	0.040631	0.063828	0.063543	0.040688	0.018342	0.021386	0.024628	0.014299	0.021697	0.018168	0.047186	0.051779	0.085190	0.084100	0.204673	0.097500	0.046678	0.049734	0.015679	25
26	Unallocated	0.021994	0.017667	0.022953	0.091928	0.064992	0.038624	0.029263	0.016591	0.045423	0.028129	0.024373	0.052702	0.041392	0.042591	0.057520	0.069989	0.091374	0.042310	0.010787	26

TABLE 3 continued.

Sector number	Sector title	20 Primary metals	21 Other mfg.	22 Mining	23 Utilities	24 Selected services	25 Trade and trans.	26 Unal-located	Sector number
1	Meat animals and products	-0.000000	0.000013	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	1
2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	2
3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	3
4	Food and feed grains	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	4
5	Cotton	-0.000000	0.000133	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	5
6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	6
7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	7
8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	8
9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	9
10	Miscellaneous agriculture	-0.000000	0.000741	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	10
11	Grain mill products	-0.000000	0.000003	-0.000000	-0.000000	-0.000000	0.000018	0.000009	11
12	Meat and poultry processing	-0.000000	0.000373	-0.000000	-0.000000	0.000041	0.000207	0.002531	12
13	Dairy products	-0.000000	0.000025	-0.000000	-0.000000	0.000028	0.000141	0.000069	13
14	Canning, preserving, freezing	-0.000000	0.000028	-0.000000	-0.000000	0.000020	0.000105	0.000053	14
15	Miscellaneous agri. processing	0.000156	0.000322	0.000005	-0.000000	0.000036	0.000108	0.000605	15
16	Chemicals and fertilizers	0.009338	0.032407	0.011853	0.000212	0.004541	0.000504	0.003562	16
17	Petroleum	0.006046	0.004884	0.017637	0.007008	0.005643	0.016509	0.003564	17
18	Fabricated metals and machinery	0.038449	0.025350	0.038357	0.006447	0.037279	0.005475	0.009001	18
19	Aircraft and parts	0.000066	0.001941	-0.000000	-0.000000	0.131656	0.001992	0.009798	19
20	Primary metals	0.158297	0.013852	0.017465	0.000717	0.000150	0.000403	0.001190	20
21	Other manufacturing	0.014056	0.194796	0.034279	0.019389	0.035064	0.009839	0.036169	21
22	Mining	0.091384	0.016459	0.086208	0.000058	0.000205	0.000240	0.001147	22
23	Utilities	0.021002	0.011511	0.021887	0.144461	0.010552	0.021604	0.014783	23
24	Selected services	0.003887	0.005245	0.001787	0.001300	0.069002	0.018514	0.014397	24
25	Trade and transportation	0.075203	0.069031	0.037800	0.012786	0.035508	0.034738	0.035907	25
26	Unallocated	0.025031	0.031910	0.048632	0.080306	0.157312	0.133028	0.128749	26

a/ Each entry shows dollars of direct purchases from the California sector listed at the left by the California sector listed at the top per dollar of output of the latter sector.

Interdependency Coefficients

Table 4 provides the numerical counterpart of the coefficients of the $(I-A)^{-1}$ matrix presented in Equation (5). These interdependency or inverse coefficients show the direct and indirect requirements for products of the row sector per dollar of delivery to final demand of products of the column sector. For example, the delivery of $1 of processed dairy products (sector 13) requires, directly and indirectly, .000484 dollars from the meat animal and product (sector 1), .000272 dollars from poultry and eggs (sector 2), .464407 dollars from the farm dairy products (sector 3), and so forth. The interrelationship between sectors may be very apparent and substantial as with the farm dairy products sector making direct sales of raw milk to the dairy processing sector or very circuitous as one sector may be selling to a sector, which is in turn selling to a sector, which is making direct sales to the sector in question.

The California-Arizona Model

Transaction Table

The interindustry flow of goods and services (or transaction table) between California and Arizona sectors is presented in Table 5. These product transactions (in thousands of dollars) are the empirical counterpart of Table 1. California sectors are designated with a "C" and Arizona sectors with "A." For any sector, reading across the row gives "sales" to California sectors; Arizona sectors are "outside." Sectors C28 and A28 are now defined as trade sectors representing states other than California and Arizona and foreign countries.

Trade patterns between California and Arizona are identified in quadrants II and III of Table 5. Quadrant II provides estimates of Arizona gross imports (for endogenous sectors 1-26) from corresponding California sector whereas quadrant III gives similar estimates of California gross imports from Arizona sectors. For ease in comparison, columns in these quadrants are summed and presented in columns 1 and 2 of Table 6. The net trade relationship for each sector is tabulated in columns 3 and 4. For example, California sector 1 (Meat animals and products) purchased $1,776,000 of products from Arizona and the corresponding Arizona sector purchased $943,000 of meat animals and products

TABLE 4

Interdependency Coefficients, California Economy, 1958[a/]

Sector number	Sector title	1 Meat animals	2 Poultry and eggs	3 Farm dairy prod.	4 Grains	5 Cotton	6 Veg.	7 Fruit and nuts	8 Citrus	9 Forage	10 Misc. agri.	11 Grain mill prod.	12 Meat & poultry proc.	13 Dairy prod.	14 Canning, preserving, freezing	15 Misc. agri. proc.	16 Chem. and fert.	17 Petro-leum	18 Fab. metals & mach.	19 Air-craft	Sector number
1	Meat animals and products	1.706155	0.000422	0.000173	0.000210	0.000129	0.000124	0.000144	0.000084	0.000107	0.000067	0.001038	0.382038	0.000484	0.002859	0.004110	0.001321	0.000278	0.000115	0.000040	1
2	Poultry and eggs	0.000035	1.215751	0.000039	0.000039	0.000024	0.000024	0.000028	0.000017	0.000020	0.000012	0.000276	0.064562	0.000272	0.000579	0.002545	0.000289	0.000051	0.000020	0.000007	2
3	Farm dairy products	0.001137	0.000566	1.327157	0.000035	0.000020	0.000026	0.000036	0.000021	0.000018	0.000013	0.001680	0.001359	0.464407	0.003041	0.002247	0.000502	0.000036	0.000016	0.000006	3
4	Food and feed grains	0.077000	0.169886	0.067567	1.028894	0.000257	0.000148	0.000117	0.000082	0.000103	0.001758	0.208215	0.338521	0.031436	0.001918	0.011124	0.000974	0.000069	0.000025	0.000008	4
5	Cotton	0.000002	0.000005	0.000002	0.000002	1.002330	0.000005	0.000006	0.000004	0.000002	0.000007	0.000003	0.000008	0.000012	0.000005	0.000008	0.000004	0.000007	0.000004	0.000004	5
6	Vegetables	0.000004	0.000011	0.000004	0.000005	0.000003	1.003267	0.000005	0.000003	0.000003	0.000002	0.000027	0.000004	0.000035	0.107832	0.000429	0.000066	0.000005	0.000003	0.000001	6
7	Fruit (excluding citrus) & nuts	0.000128	0.000510	0.000143	0.000065	0.000037	0.000053	1.000036	0.000046	0.000034	0.000021	0.001503	0.000098	0.001988	0.169311	0.027397	0.001208	0.000069	0.000022	0.000007	7
8	Citrus	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000092	0.000000	0.000003	0.009776	0.000039	0.000006	0.000000	0.000000	0.000000	8
9	Forage	0.208620	0.084196	0.244922	0.088843	0.002303	0.001070	0.000571	0.000471	1.000747	0.017977	0.012467	0.080212	0.110491	0.002261	0.002539	0.000625	0.000077	0.000032	0.000011	9
10	Miscellaneous agriculture	0.016645	0.008423	0.021193	0.045672	0.131403	0.060000	0.030682	0.025869	0.041666	1.039596	0.011714	0.006937	0.012023	0.050697	0.030869	0.011136	0.000476	0.000201	0.000068	10
11	Grain mill products	0.075693	0.333059	0.085458	0.000249	0.000262	0.000226	0.000258	0.000163	0.000150	0.001239	1.013353	0.046726	0.041716	0.006475	0.036821	0.003927	0.000193	0.000067	0.000021	11
12	Meat and poultry processing	0.000422	0.001146	0.000471	0.000570	0.000349	0.000335	0.000390	0.000228	0.000290	0.000182	0.002823	1.039512	0.001314	0.007277	0.011182	0.003592	0.000754	0.000310	0.000109	12
13	Dairy products	0.007321	0.001325	0.000363	0.000081	0.000046	0.000061	0.000084	0.000050	0.000042	0.000029	0.003935	0.003183	1.087933	0.007123	0.005264	0.001177	0.000084	0.000038	0.000013	13
14	Canning, preserving, freezing	0.000035	0.000103	0.000041	0.000046	0.000026	0.000034	0.000047	0.000028	0.000024	0.000015	0.000231	0.000035	0.000330	1.016136	0.000044	0.000624	0.000051	0.000024	0.000008	14
15	Miscellaneous agri. processing	0.004856	0.019774	0.005415	0.002014	0.001142	0.001658	0.002383	0.001427	0.001056	0.000644	0.058811	0.003337	0.077945	0.052952	1.080156	0.038305	0.002194	0.000648	0.000198	15
16	Chemicals and fertilizers	0.016946	0.028280	0.016900	0.061178	0.034586	0.051795	0.075380	0.045216	0.032129	0.017411	0.048383	0.012988	0.039836	0.046852	0.031922	1.253676	0.048353	0.017048	0.005062	16
17	Petroleum	0.021035	0.042480	0.022119	0.091863	0.025574	0.039437	0.061589	0.030644	0.047916	0.020929	0.027244	0.017325	0.025628	0.033183	0.012982	0.007785	1.836730	0.013832	0.005884	17
18	Fabricated metals and machinery	0.038245	0.045336	0.038089	0.106745	0.026733	0.043390	0.063335	0.033183	0.059928	0.024553	0.037823	0.027627	0.032940	0.153724	0.034680	0.036019	0.047918	1.212715	0.083780	18
19	Aircraft and parts	0.003177	0.004248	0.003097	0.006084	0.002799	0.003312	0.004164	0.002295	0.003281	0.002064	0.003433	0.008785	0.005599	0.005499	0.004838	0.005341	0.005416	0.010132	1.254136	19
20	Primary metals	0.005612	0.007069	0.005604	0.015020	0.004195	0.006897	0.009827	0.005251	0.008403	0.003673	0.006550	0.004480	0.006168	0.023046	0.006566	0.017164	0.008702	0.154999	0.044200	20
21	Other manufacturing	0.015876	0.034787	0.017050	0.325257	0.012652	0.037340	0.045299	0.027408	0.013514	0.012773	0.056189	0.019934	0.063254	0.090917	0.038689	0.056865	0.028666	0.055210	0.027231	21
22	Mining	0.001529	0.002985	0.001597	0.003994	0.001418	0.002382	0.003251	0.001802	0.002150	0.001114	0.004868	0.001888	0.003532	0.005610	0.002771	0.014197	0.027129	0.017484	0.005125	22
23	Utilities	0.012388	0.019213	0.014458	0.015370	0.011763	0.013224	0.018050	0.010657	0.008976	0.013381	0.012492	0.015642	0.021565	0.021471	0.018001	0.026924	0.033364	0.019357	0.010517	23
24	Selected services	0.011659	0.015148	0.010208	0.020473	0.008251	0.012213	0.016657	0.009109	0.011410	0.007485	0.016994	0.042126	0.020215	0.015852	0.016264	0.017156	0.012277	0.007820	0.003250	24
25	Trade and transportation	0.064604	0.123084	0.091574	0.070544	0.033283	0.039659	0.047982	0.027831	0.037230	0.027776	0.088622	0.094543	0.167106	0.137311	0.249130	0.150110	0.109839	0.085654	0.032495	25
26	Unallocated	0.066878	0.087796	0.073998	0.147542	0.094384	0.068256	0.084585	0.036649	0.073616	0.047054	0.083536	0.112771	0.121260	0.111824	0.126616	0.138730	0.224026	0.085645	0.029717	26

TABLE 4 continued.

Sector number	Sector title	20 Primary metals	21 Other mfg.	22 Mining	23 Utilities	24 Selected services	25 Trade and trans.	26 Unal-located	Sector number
1	Meat animals and products	0.000103	0.000328	0.000117	0.000124	0.000254	0.000259	0.001152	1
2	Poultry and eggs	0.000019	0.000056	0.000021	0.000021	0.000044	0.000044	0.000198	2
3	Farm dairy products	0.000018	0.000047	0.000016	0.000008	0.000032	0.000078	0.000051	3
4	Food and feed grains	0.000027	0.000078	0.000028	0.000016	0.000038	0.000040	0.000135	4
5	Cotton	0.000005	0.000167	0.000007	0.000005	0.000009	0.000003	0.000007	5
6	Vegetables	0.000003	0.000008	0.000002	0.000001	0.000005	0.000013	0.000008	6
7	Fruit (excluding citrus) & nuts	0.000028	0.000072	0.000025	0.000007	0.000024	0.000031	0.000040	7
8	Citrus	0.000000	0.000001	0.000008	0.000000	0.000000	0.000001	0.000001	8
9	Forage	0.000030	0.000107	0.000033	0.000029	0.000064	0.000074	0.000256	9
10	Miscellaneous agriculture	0.000205	0.001475	0.000235	0.000059	0.000165	0.000070	0.000164	10
11	Grain mill products	0.000976	0.000207	0.000077	0.000028	0.000075	0.000078	0.000206	11
12	Meat and poultry processing	0.000278	0.000848	0.000316	0.000335	0.000689	0.000704	0.003132	12
13	Dairy products	0.000043	0.000109	0.000038	0.000018	0.000074	0.000183	0.000120	13
14	Canning, preserving, freezing	0.000027	0.000078	0.000023	0.000012	0.000049	0.000125	0.000077	14
15	Miscellaneous agri. processing	0.000861	0.002120	0.000746	0.000188	0.000577	0.000385	0.001063	15
16	Chemicals and fertilizers	0.018886	0.052688	0.020926	0.002902	0.011366	0.003577	0.008248	16
17	Petroleum	0.022332	0.016514	0.039582	0.017110	0.016461	0.033860	0.010545	17
18	Fabricated metals and machinery	0.065851	0.044460	0.057115	0.012872	0.066198	0.012422	0.017764	18
19	Aircraft and parts	0.003278	0.006405	0.002634	0.002371	0.181458	0.008821	0.017959	19
20	Primary metals	1.199898	0.027416	0.031388	0.003498	0.014908	0.003040	0.005474	20
21	Other manufacturing	0.035334	1.252723	0.056192	0.034893	0.064483	0.023461	0.056075	21
22	Mining	0.121051	0.017950	1.099026	0.001248	0.003163	0.001579	0.002912	22
23	Utilities	0.038410	0.023573	0.034133	1.175178	0.021933	0.030924	0.023279	23
24	Selected services	0.009260	0.011217	0.005641	0.004291	1.079776	0.023935	0.019761	24
25	Trade and transportation	0.110917	0.105090	0.060589	0.024790	0.062505	1.048647	0.052049	25
26	Unallocated	0.071851	0.076410	0.086414	0.117856	0.217706	0.172978	1.167007	26

a/ Each entry shows dollars of direct plus indirect requirements for products of the California sector listed at the left per dollar of final demand for products of the California sector listed at the top.

TABLE 5

Interindustry Flows of Goods and Services by Sector and Region of Origin and Destination, California-Arizona Economy, 1958[a/]

Sector number	Sector title	C 1 Meat animals	C 2 Poultry and eggs	C 3 Farm dairy prod.	C 4 Grains	C 5 Cotton	C 6 Veg.	C 7 Fruit and nuts	C 8 Citrus	C 9 Forage	C 10 Misc. agri.	C 11 Grain mill prod.	C 12 Meat & poultry proc.	C 13 Dairy prod.	C 14 Canning, preserving, freezing	C 15 Misc. agri. proc.	C 16 Chem. and fert.	C 17 Petro-leum	C 18 Fab. metals & mach.	C 19 Air-craft	Sector number
		Thousand dollars																			
C 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	492644.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 1
C 2	Poultry and eggs	-0.	57836.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	62919.	33.	6.	2634.	-0.	-0.	-0.	-0.	C 2
C 3	Farm dairy products	-0.	-0.	10401.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	319831.	-0.	-0.	-0.	-0.	-0.	-0.	C 3
C 4	Food and feed grains	28412.	26445.	18710.	4948.	-0.	-0.	-0.	-0.	-0.	479.	87879.	-0.	-0.	-0.	4967.	-0.	-0.	-0.	-0.	C 4
C 5	Cotton	-0.	-0.	-0.	-0.	697.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 5
C 6	Vegetables	-0.	-0.	-0.	-0.	-0.	1783.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	171683.	-0.	-0.	-0.	-0.	-0.	C 6
C 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	268344.	46259.	180.	-0.	-0.	-0.	C 7
C 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	15616.	-0.	-0.	-0.	-0.	-0.	C 8
C 9	Forage	98703.	-0.	93467.	-0.	-0.	-0.	-0.	-0.	-0.	5909.	5068.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 9
C 10	Miscellaneous agriculture	2000.	-0.	2910.	7467.	3775.	31280.	11697.	3880.	8221.	12725.	-0.	50.	-0.	56768.	48252.	10954.	-0.	-0.	-0.	C 10
C 11	Grain mill products	35517.	88139.	32456.	-0.	-0.	-0.	-0.	-0.	-0.	384.	4808.	-0.	305.	6268.	60810.	2299.	-0.	-0.	-0.	C 11
C 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	785.	46273.	-0.	10425.	17681.	3073.	-0.	-0.	-0.	C 12
C 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1438.	3233.	61815.	9930.	7961.	988.	-0.	-0.	-0.	C 13
C 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	25403.	4811.	516.	-0.	-0.	-0.	C 14
C 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	23020.	-0.	48787.	35014.	132756.	48324.	868.	39.	-0.	C 15
C 16	Chemicals and fertilizers	810.	985.	332.	7587.	7336.	20750.	22840.	5378.	4733.	3994.	10875.	3300.	15149.	25460.	33788.	285841.	61937.	39272.	5066.	C 16
C 17	Petroleum	381.	3067.	158.	8116.	3420.	10634.	12792.	2454.	5039.	3260.	1046.	2444.	3752.	9153.	-0.	-0.	1431437.	17018.	4848.	C 17
C 18	Fabricated metals and machinery	5874.	4317.	4223.	13949.	5015.	16695.	18755.	3781.	9391.	5672.	3466.	5985.	4629.	170714.	34019.	26223.	57208.	832824.	188945.	C 18
C 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	67.	-0.	24464.	719642.	C 19
C 20	Primary metals	38.	25.	20.	8.	8.	32.	32.	4.	9.	9.	-0.	23.	16.	1547.	1103.	10537.	944.	531734.	78933.	C 20
C 21	Other manufacturing	1445.	1860.	1146.	1233.	915.	12536.	11302.	2727.	791.	2043.	15232.	4519.	25719.	81586.	31588.	40448.	15191.	150112.	47601.	C 21
C 22	Mining	-0.	-0.	-0.	15.	8.	58.	26.	7.	10.	19.	1000.	564.	697.	1452.	1325.	11979.	39473.	3283.	412.	C 22
C 23	Utilities	2572.	2190.	2434.	949.	1644.	3672.	4082.	954.	727.	2991.	1601.	5900.	4748.	10312.	9684.	17708.	35355.	35607.	16279.	C 23
C 24	Selected services	2476.	1687.	1166.	2423.	1339.	4599.	4959.	1041.	1643.	1720.	1320.	37616.	6934.	8256.	8592.	11731.	9147.	13644.	3888.	C 24
C 25	Trade and transportation	19337.	20810.	25137.	7203.	5504.	11712.	9989.	2287.	4482.	6219.	20796.	63772.	65552.	136503.	382674.	140134.	147336.	248824.	55958.	C 25
C 26	Unallocated	10467.	5760.	9080.	16274.	19502.	21172.	11869.	2635.	9383.	9629.	10742.	64909.	31850.	69130.	107545.	100593.	288415.	211680.	38498.	C 26
C 27	Scrap and by-products	13782.	14304.	5771.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	7428.	55425.	26766.	48187.	69272.	1202.	13194.	6597.	1005.	C 27
C 28	Net trade from outside	217533.	81596.	53140.	134687.	7782.	25334.	25594.	5811.	7492.	7291.	61477.	250356.	40929.	165317.	146004.	182890.	94098.	855623.	172134.	C 28
C 29	Maintenance construction	5806.	4261.	4126.	3957.	3390.	7798.	10470.	2283.	2678.	3490.	1029.	14.	3195.	7924.	7906.	2299.	3860.	6009.	3973.	C 29
C 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 30
	Households and government	28984.	12368.	129338.	89301.	205630.	379958.	261084.	125550.	151913.	276319.	180500.	171455.	108221.	246277.	707496.	547001.	957466.	2022872.	2231017.	
A 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	128.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 1
A 2	Poultry and eggs	-0.	13.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	15.	-0.	-0.	1.	-0.	-0.	-0.	-0.	A 2
A 3	Farm dairy products	-0.	-0.	15.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	463.	-0.	-0.	-0.	-0.	-0.	-0.	A 3
A 4	Food and feed grains	358.	333.	236.	62.	-0.	-0.	-0.	-0.	-0.	6.	1107.	-0.	-0.	-0.	63.	-0.	-0.	-0.	-0.	A 4
A 5	Cotton	-0.	-0.	-0.	-0.	42.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 5
A 6	Vegetables	-0.	-0.	-0.	-0.	-0.	7.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	694.	-0.	-0.	-0.	-0.	-0.	A 6
A 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 7
A 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	234.	-0.	-0.	-0.	-0.	-0.	A 8
A 9	Forage	1368.	-0.	1295.	-0.	-0.	-0.	-0.	-0.	-0.	82.	70.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 9
A 10	Miscellaneous agriculture	3.	-0.	4.	11.	55.	46.	17.	4.	12.	19.	-0.	-0.	-0.	83.	70.	16.	-0.	-0.	-0.	A 10
A 11	Grain mill products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 11
A 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 12
A 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 13
A 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 14
A 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 15
A 16	Chemicals and fertilizers	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 16
A 17	Petroleum	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 17
A 18	Fabricated metals and machinery	23.	17.	17.	55.	20.	66.	74.	15.	37.	22.	14.	23.	18.	670.	134.	103.	225.	3269.	742.	A 18
A 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 19
A 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 20
A 21	Other manufacturing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 21
A 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3.	2.	2.	4.	4.	37.	121.	10.	1.	A 22
A 23	Utilities	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 23
A 24	Selected services	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 24
A 25	Trade and transportation	18.	20.	24.	7.	5.	11.	9.	2.	4.	6.	20.	60.	62.	129.	362.	132.	139.	235.	53.	A 25
A 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 26
A 27	Scrap and by-products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 27
A 28	Net trade from outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 28
A 29	Maintenance construction	6.	4.	4.	4.	3.	7.	10.	2.	3.	3.	1.	-0.	3.	8.	8.	2.	4.	6.	4.	A 29
A 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	
	GROSS OUTLAY	475913.	326035.	395590.	177030.	300069.	548158.	485601.	158825.	286568.	342311.	440725.	1231629.	769476.	1623105.	1869689.	1437277.	3156418.	5003122.	3569019.	G.O.

(Continued on next page.)

TABLE 5 continued.

Sector number	Sector title	C 20 Primary metals	C 21 Other mfg.	C 22 Mining	C 23 Utilities	C 24 Selected services	C 25 Trade and trans.	C 26 Unal-located	C 27 Scrap and by-prod.	C 28 Net trade to outside	C 29 Maint. constr.	C 30 New constr.	C 31 State & local gov.	C 32 Federal gov.	C 33 Inven-tory addit'n	C 34 Inven-tory deplet'n	C 35 Gross pri. cap. form.	C 36-37 All house-holds	Sector number
		thousand dollars							thousand dollars										
C 1	Meat animals and products	-0.	67.	-0.	-0.	-0.	-0.	-0.	212.	-13026.	-0.	-0.	-0.	-0.	19669.	-0.	-0.	3320.	C 1
C 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-19358.	-0.	-0.	-0.	-0.	1243.	-0.	-0.	201364.	C 2
C 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	51465.	-212.	-0.	-0.	-0.	-0.	2928.	-0.	-0.	10964.	C 3
C 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-2109.	-0.	-0.	-0.	-0.	5190.	-0.	-0.	-0.	C 4
C 5	Cotton	-0.	670.	-0.	-0.	-0.	-0.	-0.	26211.	284242.	-0.	-0.	-0.	-0.	-0.	-11751.	-0.	-0.	C 5
C 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	2475.	126349.	-0.	-0.	-0.	2756.	69.	-0.	-0.	242948.	C 6
C 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	53899.	-0.	-0.	-0.	-0.	-0.	-706.	-0.	35077.	C 7
C 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	104024.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	38740.	C 8
C 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3441.	-0.	-0.	-0.	C 9
C 10	Miscellaneous agriculture	-0.	3732.	-0.	-0.	-0.	-0.	-0.	-0.	49893.	-0.	-0.	-0.	-0.	-0.	-1985.	-0.	56493.	C 10
C 11	Grain mill products	-0.	15.	-0.	-0.	-0.	196.	128.	2583.	-5488.	-0.	-0.	1933.	-0.	1760.	-0.	-0.	203128.	C 11
C 12	Meat and poultry processing	-0.	1879.	-0.	-0.	158.	2306.	35289.	15488.	-0.	-0.	1818.	8420.	-0.	4904.	-0.	-0.	1083131.	C 12
C 13	Dairy products	-0.	126.	-0.	-0.	106.	1566.	969.	-0.	-0.	-0.	-0.	5807.	-0.	3064.	-0.	-0.	672466.	C 13
C 14	Canning, preserving, freezing	-0.	139.	-0.	-0.	77.	1164.	741.	-0.	1023180.	-0.	-0.	12436.	-0.	6462.	-0.	-0.	475325.	C 14
C 15	Miscellaneous agri. processing	191.	1621.	2.	-0.	139.	1196.	8431.	8329.	-34215.	-0.	-0.	10598.	-0.	7051.	-0.	-0.	1511322.	C 15
C 16	Chemicals and fertilizers	11411.	163245.	4682.	471.	17310.	5603.	49868.	24284.	-15977.	93217.	51374.	53937.	-0.	102.	-0.	-0.	406620.	C 16
C 17	Petroleum	7388.	24603.	6967.	15578.	21510.	183465.	49698.	3186.	391021.	46258.	113091.	50504.	-0.	-0.	-26712.	-0.	739299.	C 17
C 18	Fabricated metals and machinery	47231.	127697.	15152.	14774.	142103.	60841.	125501.	70288.	-63433.	122006.	736102.	128791.	-0.	-0.	-73152.	940959.	1133144.	C 18
C 19	Aircraft and parts	81.	9879.	-0.	-0.	501860.	22140.	136615.	39386.	2074241.	-0.	-0.	-0.	-0.	-0.	-6534.	42619.	4539.	C 19
C 20	Primary metals	193444.	69780.	6899.	1593.	573.	4475.	16597.	34552.	-14141.	44180.	228630.	-0.	-0.	-0.	-5122.	-0.	1432.	C 20
C 21	Other manufacturing	17177.	981267.	13541.	43098.	133659.	109334.	504302.	35937.	-22305.	101274.	660438.	88186.	-0.	-0.	-1262.	93026.	1809430.	C 21
C 22	Mining	111675.	52688.	34054.	128.	783.	2665.	15999.	-0.	35375.	18510.	8203.	21803.	-0.	-0.	-2841.	-0.	28434.	C 22
C 23	Utilities	25665.	57987.	8646.	325422.	40224.	240093.	206122.	-0.	-3070.	3991.	22441.	95420.	41423.	-0.	-0.	24720.	971255.	C 23
C 24	Selected services	4750.	24423.	70.	2890.	261031.	205750.	200739.	-0.	481913.	33140.	7235.	25054.	543903.	-0.	-0.	1129.	1891063.	C 24
C 25	Trade and transportation	91901.	347737.	14932.	28422.	135355.	386059.	500644.	21969.	-13072.	202484.	789771.	99734.	201668.	-0.	-0.	295460.	6573771.	C 25
C 26	Unallocated	30589.	160746.	19199.	178506.	599660.	1478380.	1795134.	-0.	-0.	24143.	402475.	220479.	296422.	-0.	-0.	88513.	7609534.	C 26
C 27	Scrap and by-products	42232.	10264.	671.	18586.	9916.	10156.	-0.	-0.	-0.	1643.	8973.	-0.	-0.	-0.	-0.	-29868.	657.	C 27
C 28	Net trade from outside	177414.	252671.	24461.	121975.	209598.	288549.	591699.	-1944.	-0.	180366.	909066.	172849.	37057.	-123.	1000.	465368.	-12485.	C 28
C 29	Maintenance construction	5486.	8355.	432.	528808.	29159.	185218.	729446.	-0.	-12272.	135.	860.	580644.	118268.	-0.	-0.	-0.	4994.	C 29
C 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-36803.	-0.	-0.	1097368.	334846.	-0.	-0.	5138191.	-0.	C 30
	Households and government	454781.	2734773.	244500.	941976.	1705970.	7923378.	8973479.	-0.	-0.	1404199.	2626266.	2344207.	5653978.	-0.	-0.	-0.	-0.	
A 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	6.	-0.	-0.	1.	A 1
A 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	47.	A 2
A 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	75.	-0.	-0.	-0.	-0.	-0.	4.	-0.	-0.	16.	A 3
A 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	65.	-0.	-0.	-0.	A 4
A 5	Cotton	-0.	40.	-0.	-0.	-0.	-0.	-0.	1563.	16950.	-0.	-0.	-0.	-0.	-0.	-701.	-0.	-0.	A 5
A 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	10.	511.	-0.	-0.	-0.	11.	-0.	-0.	-0.	982.	A 6
A 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 7
A 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1567.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	581.	A 8
A 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	48.	-0.	-0.	-0.	A 9
A 10	Miscellaneous agriculture	-0.	5.	-0.	-0.	-0.	-0.	-0.	-0.	73.	-0.	-0.	-0.	-0.	-0.	-3.	-0.	83.	A 10
A 11	Grain mill products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 11
A 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 12
A 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 13
A 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 14
A 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 15
A 16	Chemicals and fertilizers	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 16
A 17	Petroleum	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 17
A 18	Fabricated metals and machinery	185.	501.	59.	58.	558.	239.	493.	276.	-0.	479.	2890.	506.	-0.	-0.	-287.	3694.	4448.	A 18
A 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 19
A 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 20
A 21	Other manufacturing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 21
A 22	Mining	342.	161.	104.	-0.	2.	8.	49.	-0.	130.	57.	25.	67.	-0.	-0.	-9.	-0.	87.	A 22
A 23	Utilities	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 23
A 24	Selected services	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 24
A 25	Trade and transportation	87.	329.	14.	27.	128.	365.	473.	21.	46.	191.	747.	94.	191.	-0.	-0.	279.	6215.	A 25
A 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 26
A 27	Scrap and by-products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 27
A 28	Net trade with outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 28
A 29	Maintenance construction	5.	8.	-0.	505.	28.	177.	697.	-0.	-0.	-0.	1.	555.	113.	-0.	-0.	-0.	5.	A 29
A 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1024.	312.	-0.	-0.	4795.	-0.	A 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	
	GROSS OUTLAY	1222035.	5037408.	395021.	2222817.	3811907.	11113329.	13942913.	336346.	4387937.	2276253.	6570406.	5029416.	7230948.	55883.	-130065.	7069083.	25788450.	0.0.

(Continued on next page.)

TABLE 5 continued.

Sector number	Sector title	A 1 Meat animals	A 2 Poultry and eggs	A 3 Farm dairy prod.	A 4 Grains	A 5 Cotton	A 6 Veg.	A 7 Fruit and nuts	A 8 Citrus	A 9 Forage	A 10 Misc. agri.	A 11 Grain mill prod.	A 12 Meat & poultry proc.	A 13 Dairy prod.	A 14 Canning, preserving, freezing	A 15 Misc agri. proc	A 16 Chem and fert.	A 17 Petro-leum	A 18 Fab. metals & mach.	A 19 Air-craft	Sector number
		thousand dollars																			
C 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	2670.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 1
C 2	Poultry and eggs	-0.	2075.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	212.	-0.	-0.	-0.	-0.	-0.	-0.	0.	C 2
C 3	Farm dairy products	-0.	-0.	6.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	170.	-0.	-0.	-0.	-0.	-0.	-0.	C 3
C 4	Food and feed grains	245.	108.	241.	57.	-0.	-0.	-0.	-0.	-0.	22.	496.	-0.	-0.	-0.	1.	-0.	-0.	-0.	-0.	C 4
C 5	Cotton	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 5
C 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 6
C 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	163.	-0.	-0.	-0.	-0.	C 7
C 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	8.	-0.	-0.	-0.	-0.	-0.	C 8
C 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 9
C 10	Miscellaneous agriculture	5.	-0.	1.	5.	114.	5.	-0.	5.	4.	3.	-0.	-0.	-0.	-0.	6.	-0.	-0.	-0.	-0.	C 10
C 11	Grain mill products	374.	701.	436.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	175.	-0.	7.	6.	1172.	100.	-0.	-0.	-0.	C 11
C 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 12
C 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 13
C 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	460.	545.	153.	-0.	-0.	-0.	C 14
C 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	203.	-0.	49.	32.	714.	555.	-0.	-0.	-0.	C 15
C 16	Chemicals and fertilizers	15.	3.	5.	422.	1010.	358.	14.	61.	129.	46.	214.	12.	77.	36.	433.	963.	11.	60.	22.	C 16
C 17	Petroleum	6.	4.	-0.	57.	88.	30.	3.	10.	27.	7.	2.	3.	7.	1.	9.	25.	8.	10.	7.	C 17
C 18	Fabricated metals and machinery	56.	3.	15.	208.	201.	87.	5.	22.	103.	107.	8.	6.	17.	1.	14.	30.	4.	6050.	3591.	C 18
C 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 19
C 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1.	7.	20.	-0.	517.	265.	C 20
C 21	Other manufacturing	7.	3.	1.	4.	12.	112.	2.	7.	2.	5.	37.	11.	100.	10.	48.	41.	1.	247.	198.	C 21
C 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	4.	-0.	-0.	-0.	C 22
C 23	Utilities	13.	1.	4.	3.	25.	7.	-0.	1.	2.	3.	2.	6.	6.	1.	5.	13.	1.	15.	14.	C 23
C 24	Selected services	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 24
C 25	Trade and transportation	175.	-0.	136.	3.	19.	5.	1.	2.	2.	29.	101.	462.	361.	32.	370.	247.	16.	518.	246.	C 25
C 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 26
C 27	Scrap and by-products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 27
C 28	Net trade from outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 28
C 29	Maintenance construction	47.	2.	10.	18.	80.	22.	1.	4.	13.	5.	6.	10.	20.	2.	27.	10.	-0.	14.	19.	C 29
C 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	C 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	
A 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	29278.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 1
A 2	Poultry and eggs	-0.	870.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	89.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 2
A 3	Farm dairy products	-0.	-0.	678.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	20640.	-0.	-0.	-0.	-0.	-0.	-0.	A 3
A 4	Food and feed grains	3276.	1442.	3224.	765.	-0.	-0.	-0.	-0.	-0.	296.	6632.	-0.	-0.	-0.	100.	-0.	-0.	-0.	-0.	A 4
A 5	Cotton	-0.	-0.	-0.	-0.	189.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 5
A 6	Vegetables	-0.	-0.	-0.	-0.	-0.	291.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	71.	-0.	-0.	-0.	-0.	-0.	A 6
A 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	109.	-0.	-0.	-0.	-0.	A 7
A 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	9.	-0.	-0.	-0.	-0.	-0.	168.	-0.	-0.	-0.	-0.	-0.	A 8
A 9	Forage	23342.	-0.	4520.	-0.	-0.	-0.	-0.	-0.	-0.	1847.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 9
A 10	Miscellaneous agriculture	638.	-0.	116.	688.	14428.	682.	34.	601.	447.	328.	-0.	-0.	-0.	-0.	773.	45.	-0.	-0.	-0.	A 10
A 11	Grain mill products	1584.	2974.	1847.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	741.	-0.	28.	25.	4971.	424.	-0.	-0.	-0.	A 11
A 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	25.	2431.	-0.	16.	394.	162.	-0.	-0.	-0.	A 12
A 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	65.	112.	4504.	22.	246.	100.	-0.	-0.	-0.	A 13
A 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	27.	32.	9.	-0.	-0.	-0.	A 14
A 15	Miscellaneous agri processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	300.	-0.	72.	47.	1053.	818.	-0.	-0.	-0.	A 15
A 16	Chemicals and fertilizers	36.	7.	12.	1029.	2462.	873.	34.	149.	315.	112.	521.	30.	188.	88.	1056.	2347.	27.	147.	53.	A 16
A 17	Petroleum	6.	4.	-0.	60.	93.	32.	3.	11.	28.	7.	2.	3.	7.	1.	9.	26.	6.	11.	7.	A 17
A 18	Fabricated metals and machinery	87.	5.	23.	324.	312.	135.	7.	34.	160.	166.	13.	10.	27.	2.	21.	46.	6.	9408.	5585.	A 18
A 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1.	-0.	452.	18892.	A 19
A 20	Primary metals	2.	-0.	1.	-0.	3.	1.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	7.	77.	229.	-0.	6012.	3079.	A 20
A 21	Other manufacturing	55.	26.	11.	34.	95.	882.	15.	59.	17.	37.	292.	85.	792.	75.	377.	322.	9.	1948.	1560.	A 21
A 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1.	1.	-0.	1.	155.	10.	15.	-0.	A 22
A 23	Utilities	812.	61.	225.	165.	1542.	402.	17.	67.	115.	161.	103.	363.	346.	31.	327.	804.	41.	898.	878.	A 23
A 24	Selected services	314.	12.	43.	35.	110.	47.	4.	15.	15.	17.	61.	249.	385.	18.	149.	207.	3.	245.	29.	A 24
A 25	Trade and transportation	1775.	3.	1385.	31.	188.	50.	6.	20.	24.	298.	1023.	4699.	3670.	326.	3757.	2511.	166.	5262.	2503.	A 25
A 26	Unallocated	5050.	117.	717.	1986.	8094.	1706.	94.	360.	1161.	876.	617.	2169.	2083.	193.	3249.	2010.	121.	5323.	7046.	A 26
A 27	Scrap and by-products	763.	163.	28.	-0.	-0.	725.	27.	73.	-0.	11.	1548.	2667.	-0.	-0.	-0.	12686.	-0.	42.	10.	A 27
A 28	Net trade with outside	69652.	-1978.	15.	6074.	10295.	7421.	279.	1093.	2691.	1994.	2547.	5732.	3241.	757.	3977.	7814.	1888.	21304.	7845.	A 28
A 29	Maintenance construction	500.	21.	104.	189.	857.	236.	12.	44.	143.	49.	61.	109.	216.	23.	291.	109.	4.	148.	201.	A 29
A 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	A 30
	Households and government	33990.	1490.	11932.	16004.	110578.	59731.	1143.	7251.	28862.	20465.	7479.	187.	9128.	1676.	25964.	5968.	332.	40302.	46539.	
	GROSS OUTLAY	142825.	8117.	25736.	28161.	150795.	73840.	1701.	9898.	34260.	26891.	23274.	51606.	46142.	4163.	50453.	38954.	2652.	98948.	98589.	G O.

(Continued on next page)

TABLE 5 continued.

Sector number	Sector title	A 20 Primary metals	A 21 Other mfg.	A 22 Mining	A 23 Utilities	A 24 Selected services	A 25 Trade and trans.	A 26 Unal-located	A 27 Scrap and by-prod.	A 28 Net trade with outside	A 29 Maint. constr.	A 30 New constr.	A 31 State & local gov.	A 32 Federal gov	A 33 Inven-tory addit'n	A 34 Inven-tory deplet'n	A 35 Gross pri. cap. form.	A 36-37 All house-holds	GROSS DOMESTIC OUTPUT b/	Sector number
		thousand dollars							thousand dollars											
C 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	9858.	-0.	-0.	-0.	-0.	288.	-0.	-0.	209.	475911.	C 1
C 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	339.	-0.	-0.	16732.	326035.	C 2
C 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	22.	-0.	-0.	-0.	-0.	-0.	4.	-0.	-0.	11.	395590.	C 3
C 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	766.	-0.	-0.	1.	-0.	159.	-0.	-0.	3.	177030.	C 4
C 5	Cotton	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	300069.	C 5
C 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	72.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	15.	548150.	C 6
C 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	677.	-0.	-0.	1.	-0.	-0.	-0.	-0.	1706.	405600.	C 7
C 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	340.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	97.	158825.	C 8
C 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	206568.	C 9
C 10	Miscellaneous agriculture	-0.	17.	-0.	-0.	-0.	-0.	-0.	-0.	36.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	10.	342310.	C 10
C 11	Grain mill products	-0.	-0.	-0.	-0.	1.	4.	98.	41.	-0.	-0.	-0.	59.	-0.	-0.	-19.	-0.	2335.	440727.	C 11
C 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1231630.	C 12
C 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	769677.	C 13
C 14	Canning, preserving, freezing	-0.	17.	-0.	-0.	34.	153.	3882.	-0.	-0.	-0.	-0.	289.	-0.	630.	-0.	-0.	64687.	1623104.	C 14
C 15	Miscellaneous agri. processing	-0.	7.	-0.	-0.	12.	52.	1354.	6.	-0.	-0.	-0.	41.	-0.	23.	-0.	-0.	31165.	1869686.	C 15
C 16	Chemicals and fertilizers	226.	313.	1459.	8.	164.	41.	207.	4347.	-0.	584.	420.	164.	-0.	15.	-0.	-0.	4139.	1437278.	C 16
C 17	Petroleum	21.	29.	87.	52.	43.	312.	100.	2.	-0.	81.	192.	60.	-0.	-0.	-10.	-0.	1252.	3156418.	C 17
C 18	Fabricated metals and machinery	1376.	654.	420.	725.	2316.	538.	3827.	475.	6388.	3241.	17758.	431.	-0.	-0.	-1174.	7547.	8383.	5003122.	C 18
C 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3569019.	C 19
C 20	Primary metals	4520.	73.	260.	22.	5.	22.	124.	124.	7237.	203.	638.	-0.	-0.	98.	-0.	-0.	6.	1222036.	C 20
C 21	Other manufacturing	171.	3385.	513.	92.	358.	344.	3237.	38.	57.	956.	6725.	195.	-0.	22.	-0.	285.	5076.	5037396.	C 21
C 22	Mining	337.	70.	1569.	1.	-0.	-0.	1.	-0.	5111.	23.	101.	-0.	-0.	-0.	-0.	-0.	-0.	395021.	C 22
C 23	Utilities	67.	45.	145.	316.	59.	274.	272.	-0.	505.	5.	25.	52.	60.	-0.	-0.	17.	1107.	2222819.	C 23
C 24	Selected services	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3811907.	C 24
C 25	Trade and transportation	892.	1148.	1143.	380.	1359.	2140.	3042.	-0.	2261.	1146.	4369.	297.	1538.	-0.	-0.	1083.	38728.	11113313.	C 25
C 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	13942913.	C 26
C 27	Scrap and by-products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	336365.	C 27
C 28	Net trade from outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5831423.	C 28
C 29	Maintenance construction	10.	31.	40.	628.	207.	1107.	5291.	-0.	-0.	1.	5.	4182.	460.	-0.	-0.	-0.	-0.	2276253.	C 29
C 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1931.	-0.	-0.	34872.	-0.	6570405.	C 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	43840257.	
A 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	107956.	-0.	-0.	-0.	-0.	3161.	-0.	-0.	2294.	142824.	A 1
A 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-76.	-0.	-0.	-0.	-0.	142.	-0.	-0.	7016.	8117.	A 2
A 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	2667.	-573.	-0.	-0.	-0.	-0.	450.	-0.	-0.	1300.	25735.	A 3
A 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	8016.	-0.	-0.	10.	-0.	2127.	-0.	-0.	44.	28162.	A 4
A 5	Cotton	-0.	-0.	-0.	-0.	-0.	-0.	-0.	13098.	49775.	-0.	-0.	49.	-0.	69790.	-0.	-0.	-0.	150795.	A 5
A 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	58911.	-0.	-0.	24.	-0.	-0.	-0.	-0.	12329.	73841.	A 6
A 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	452.	-0.	-0.	1.	-0.	-0.	-0.	-0.	1138.	1700.	A 7
A 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5171.	-0.	-0.	3.	-0.	-0.	-0.	-0.	2165.	9898.	A 8
A 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1979.	-0.	-0.	30.	-0.	-0.	-320.	-0.	-0.	34261.	A 9
A 10	Miscellaneous agriculture	-0.	2182.	-0.	-0.	-0.	-0.	-0.	59.	4125.	-0.	-0.	.	-0.	-0.	-13.	-0.	1253.	26889.	A 10
A 11	Grain mill products	-0.	1.	-0.	-0.	3.	16.	416.	172.	-0.	-0.	-0.	251.	-0.	-0.	-82.	-0.	9902.	23273.	A 11
A 12	Meat and poultry processing	-0.	29.	-0.	-0.	18.	77.	2008.	-0.	-0.	-0.	-0.	79.	-0.	109.	-0.	-0.	46260.	51608.	A 12
A 13	Dairy products	-0.	3.	-0.	-0.	16.	71.	1826.	-0.	-0.	-0.	-0.	512.	-0.	4.	-0.	-0.	38661.	46142.	A 13
A 14	Canning, preserving, freezing	-0.	1.	-0.	-0.	2.	9.	228.	-0.	-0.	-0.	-0.	17.	-0.	37.	-0.	-0.	3799.	4161.	A 14
A 15	Miscellaneous agri. processing	-0.	11.	-0.	-0.	17.	77.	1997.	9.	-0.	-0.	-0.	61.	-0.	34.	-0.	-0.	45955.	50451.	A 15
A 16	Chemicals and fertilizers	552.	762.	3557.	19.	400.	99.	504.	10599.	-0.	1423.	1025.	401.	-0.	36.	-0.	-0.	10090.	38953.	A 16
A 17	Petroleum	22.	31.	91.	55.	45.	328.	105.	2.	-0.	85.	202.	63.	-0.	-0.	-10.	-0.	1317.	2652.	A 17
A 18	Fabricated metals and machinery	2140.	1017.	653.	1127.	3602.	837.	5952.	738.	-9706.	5041.	27616.	671.	-0.	-0.	-1826.	11737.	13037.	98650.	A 18
A 19	Aircraft and parts	4.	178.	-0.	-0.	2042.	797.	5694.	216.	72002.	-0.	-0.	-0.	-0.	-0.	-2878.	1031.	158.	98589.	A 19
A 20	Primary metals	52559.	848.	3025.	257.	56.	252.	1441.	1438.	84145.	2359.	7416.	-0.	-0.	1138.	-0.	-0.	73.	164418.	A 20
A 21	Other manufacturing	1346.	26680.	4047.	728.	2824.	2710.	25511.	297.	449.	7538.	53002.	1536.	-0.	176.	-0.	2249.	40007.	175791.	A 21
A 22	Mining	14676.	3046.	68376.	44.	1.	8.	42.	-0.	221503.	1018.	4403.	2.	-0.	-0.	-0.	-0.	10.	314519.	A 22
A 23	Utilities	4080.	2743.	8827.	19290.	3622.	16762.	16603.	-0.	30840.	285.	1500.	3201.	3691.	-0.	-0.	1066.	67634.	187502.	A 23
A 24	Selected services	258.	913.	344.	295.	11540.	10498.	11198.	-0.	55695.	174.	1858.	841.	10034.	-0.	-0.	-0.	104225.	209831.	A 24
A 25	Trade and transportation	9060.	11660.	11612.	3862.	13805.	21743.	30911.	-0.	12468.	11646.	44391.	3014.	15608.	-0.	-0.	11006.	393508.	632496.	A 25
A 26	Unallocated	4527.	10359.	21790.	25728.	24224.	92829.	140128.	-0.	5438.	1544.	24459.	103271.	26300.	-0.	-0.	3526.	467446.	994541.	A 26
A 27	Scrap and by-products	1620.	25.	55.	-0.	246.	135.	55.	-0.	7859.	22.	118.	397.	-0.	-0.	-0.	-0.	20.	29295.	A 27
A 28	Net trade with outside	14144.	30126.	37922.	13698.	27534.	19458.	30289.	-5054.	-0.	11664.	35739.	6609.	30092.	-1578.	1203.	-10834.	273090.	666743.	A 28
A 29	Maintenance construction	104.	331.	422.	6697.	2211.	11806.	56448.	-0.	-2175.	9.	55.	44613.	4911.	-0.	-0.	-0.	-0.	130925.	A 29
A 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-6123.	-0.	-0.	-0.	13114.	-0.	-0.	236836.	-0.	249958.	A 30
	Households and government	51704.	79056.	150164.	113478.	113069.	448999.	641750.	-0.	-0.	81876.	137059.	141838.	390248.	-0.	-0.	-0.	-0.	2778258.	
	GROSS OUTLAY	164416.	175791.	316521.	187502.	209831.	632498.	994541.	29296.	741439.	130924.	369076.	313269.	497985.	77204.	-5129.	300421.	1718392.	126487635.	G.O.

a/ Each entry shows the value of goods and services produced by California or Arizona sector listed at the left that were purchased by the California or Arizona sector listed at the top.

b/ Some column and row totals do not add up exactly due to rounding.

TABLE 6

California-Arizona Gross Trade Relations, 1958

Sector number	Sector title	Arizona gross imports from California	California gross imports from Arizona	California sectors	
				Surplus	Deficit
		1	2	3	4
		thousand dollars			
1	Meat animals and products	943	1,776	--	833
2	Poultry and eggs	2,900	387	2,513	--
3	Farm dairy products	855	1,595	--	740
4	Food and feed grains	777	139	638	--
5	Cotton	1,549	125	1,424	--
6	Vegetables	626	137	489	--
7	Fruits (excluding citrus) and nuts	26	110	--	84
8	Citrus fruit	112	25	87	--
9	Forage crops	282	56	226	--
10	Miscellaneous agriculture	227	132	95	--
11	Grain mill products	1,244	1,215	29	--
12	Meat and poultry processing	3,392	228	3,164	--
13	Dairy products	814	548	266	--
14	Canning, preserving, and freezing	590	1,822	--	1,232
15	Miscellaneous agricultural processing	3,520	638	2,882	--
16	Chemicals and fertilizers	2,161	290	1,871	--
17	Petroleum	39	489	--	450
18	Fabricated metals and machinery	7,431	3,520	3,911	--
19	Aircraft	4,362	800	3,562	--
20	Primary metals	7,620	619	7,001	--
21	Other manufacturing	5,789	1,044	4,745	--
22	Mining	5,636	177	5,459	--
23	Utilities	2,224	590	1,634	--
24	Selected services	4,558	714	3,844	--
25	Trade and transportation	4,987	789	4,198	--
26	Unallocated services	21,435	1,712	19,723	--
	TOTAL	84,099	19,677	67,761	3,339

from California. Thus, California sector 1 has a net deficit of $833,000. In terms of production agriculture (sectors 1-10) Arizona has a net deficit of $3,815,000 ($8,297,000-$4,482,000). Only 5 California sectors have a negative trade balance as compared to 21 Arizona sectors.

Technical Coefficients

Table 7 gives the direct requirements per dollar of output for the combined California-Arizona economy and were derived from the relationship shown in Equation (9a) - (9d).

Direct and Indirect Coefficients

The inverse matrix (N^* in Equation 11c) shows the direct and indirect effect on output for each of the 26 sectors in the 2 states in relation to a one dollar change in final demand (Y_j) incurred in either state for any sector j (Table 8). We can summarize the total direct and indirect effects on each sector by summing down the N^* matrix; specifically, we define the "total effects" as a 1 x 52 partitioned vector $K^* = [1]\ N^* = [K^c : K^a]$.[1/] Likewise taking column sums for the submatrices of N^* separates this "total effect" into individual state components. This is, $K^{cc} = [1]\ A^{*c}$, $K^{ac} = [1]\ M^{*c}$ and $K^{ca} = [1]\ M^{*a}$ and $K^{aa} = [1]\ A^{*a}$ where [1] is a 1 x 26 sum vector.[2/]

California dependence on Arizona.--One measure of California's dependence on Arizona can be defined as the ratio of corresponding coefficients in K^{ac} and K^c as presented in Table 9. For example, the total output generated in both California and Arizona from a one dollar change in final demand for products of sector 1 (Meat animals and products) is $1.646616 ($K_1^c$). The partial sum of K_1^{ac} which provides an estimate of direct plus indirect output generated in Arizona to sustain one dollar of final demand for products of California sector 1 is $.004684. The ratio of this "partial" to "total effects" ($.002845) gives an index of California sector 1 dependence on Arizona sectors. Column 4 (Table 9) ranks the index measures in the order of decreasing magnitudes. California sectors 3 (Farm dairy products), 1 (Meat animals and products), 11 (Grain

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1/ [1] is a "a" unit vector of appropriate dimensions.

2/ By definition $K^c = K^{cc} + K^{ac}$ and $K^a = K^{aa} + K^{ca}$.

TABLE 7

Technical and Trade Coefficients, California-Arizona Economy, 1958[a]

Sector number	Sector title	C 1 Meat animals	C 2 Poultry and eggs	C 3 Farm dairy prod.	C 4 Grains	C 5 Cotton	C 6 Veg	C 7 Fruit and nuts	C 8 Citrus	C 9 Forage	C 10 Misc. agri.	C 11 Grain mill prod.	C 12 Meat & poultry proc.	C 13 Dairy prod.	C 14 Canning, preserving, freezing	C 15 Misc. agri. proc.	C 16 Chem. and fert.	C 17 Petro-leum	C 18 Fab. metals & mach.	C 19 Air-craft	Sector number
C 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.367518	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 1
C 2	Poultry and eggs	-0.000000	0.177392	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000000	-0.000000	0.051086	0.000043	0.000004	0.001409	-0.000000	-0.000000	0.000000	-0.000000	C 2
C 3	Farm dairy products	-0.000000	-0.000000	0.026292	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000000	-0.000000	0.415647	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 3
C 4	Food and feed grains	0.059700	0.081111	0.047297	0.027950	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001399	0.199396	-0.000000	-0.000000	-0.000000	0.002657	-0.000000	-0.000000	-0.000000	-0.000000	C 4
C 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	0.002323	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 5
C 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.003253	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.105774	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 6
C 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.165328	0.024742	0.000125	-0.000000	-0.000000	-0.000000	C 7
C 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.009621	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 8
C 9	Forage	0.207398	-0.000000	0.236222	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.017262	0.011499	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 9
C 10	Miscellaneous agriculture	0.004202	-0.000000	0.007356	0.042179	0.125818	0.057065	0.028839	0.024480	0.039798	0.037174	-0.000000	0.000041	-0.000000	0.034975	0.025808	0.007621	-0.000000	-0.000000	-0.000000	C 10
C 11	Grain mill products	0.074629	0.270324	0.082045	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001122	0.010909	-0.000000	0.000396	0.003862	0.032524	0.001600	-0.000000	-0.000000	-0.000000	C 11
C 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001781	0.037571	-0.000000	0.006423	0.009457	0.002138	-0.000000	-0.000000	-0.000000	C 12
C 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.003263	0.002625	0.080334	0.006123	0.004258	0.000687	-0.000000	-0.000000	-0.000000	C 13
C 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.015651	0.003643	0.000359	-0.000000	-0.000000	-0.000000	C 14
C 15	Miscellaneous agri. processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.052232	-0.000000	0.063403	0.046216	0.071004	0.028056	0.000275	0.000008	-0.000000	C 15
C 16	Chemicals and fertilizers	0.001702	0.003021	0.000839	0.042857	0.024448	0.037855	0.056311	0.033861	0.022913	0.011668	0.024575	0.002639	0.019687	0.015686	0.018029	0.198877	0.019623	0.007849	0.001419	C 16
C 17	Petroleum	0.000801	0.009407	0.000399	0.043845	0.011397	0.019400	0.031538	0.015451	0.024394	0.009582	0.002373	0.001984	0.004876	0.005638	-0.000000	-0.000000	0.455501	0.003401	0.001358	C 17
C 18	Fabricated metals and machinery	0.012343	0.013241	0.010675	0.071795	0.016713	0.030457	0.046240	0.023806	0.045462	0.016570	0.007864	0.004859	0.006016	0.105177	0.018195	0.018245	0.018124	0.166461	0.052940	C 18
C 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000047	-0.000000	0.004890	0.201641	C 19
C 20	Primary metals	0.000080	0.000077	0.000051	0.000045	0.000027	0.000058	0.000079	0.000075	0.000044	0.000026	-0.000000	0.000019	0.000021	0.000953	0.000590	0.007331	0.000299	0.106280	0.022116	C 20
C 21	Other manufacturing	0.003036	0.005705	0.002897	0.004965	0.003049	0.022870	0.027865	0.017170	0.003829	0.005968	0.034561	0.003669	0.033424	0.050265	0.016895	0.028142	0.004813	0.030004	0.013337	C 21
C 22	Mining	-0.000000	-0.000000	-0.000000	0.000085	0.000027	0.000106	0.000064	0.000044	0.000048	0.000056	0.002269	0.000458	0.000906	0.000895	0.000709	0.008335	0.012506	0.000656	0.000115	C 22
C 23	Utilities	0.005404	0.006717	0.006153	0.005361	0.005479	0.006699	0.010064	0.006007	0.003519	0.008738	0.003633	0.004790	0.006170	0.006353	0.005179	0.012321	0.011201	0.007117	0.004561	C 23
C 24	Selected services	0.005203	0.005174	0.002948	0.013687	0.004462	0.008390	0.012226	0.006554	0.007954	0.005025	0.002995	0.030542	0.009011	0.005087	0.004595	0.008162	0.002898	0.002727	0.001089	C 24
C 25	Trade and transportation	0.040631	0.063828	0.063543	0.040688	0.018342	0.021366	0.024628	0.014399	0.021497	0.018168	0.047186	0.051779	0.085190	0.084100	0.204673	0.097500	0.246678	0.049734	0.015679	C 25
C 26	Unallocated	0.021994	0.017667	0.022953	0.091928	0.064992	0.038624	0.029263	0.016591	0.045423	0.028129	0.024373	0.052702	0.041392	0.042591	0.057520	0.069989	0.091374	0.042310	0.010787	C 26
A 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000104	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 1
A 2	Poultry and eggs	-0.000000	0.000040	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000012	-0.000000	-0.000000	0.000001	-0.000000	-0.000000	-0.000000	-0.000000	A 2
A 3	Farm dairy products	-0.000000	-0.000000	0.000038	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000502	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 3
A 4	Food and feed grains	0.000752	0.001021	0.000597	0.000350	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000018	0.002512	-0.000000	-0.000000	-0.000000	0.000034	-0.000000	-0.000000	-0.000000	-0.000000	A 4
A 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	0.000140	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 5
A 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000013	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000428	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 6
A 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 7
A 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000144	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 8
A 9	Forage	0.002874	-0.000000	0.003274	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000240	0.000159	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000000	-0.000000	A 9
A 10	Miscellaneous agriculture	0.000006	-0.000000	0.000010	0.000062	0.000183	0.000084	0.000042	0.000038	0.000058	0.000056	-0.000000	-0.000000	-0.000000	0.000051	0.000037	0.000011	-0.000000	-0.000000	-0.000000	A 10
A 11	Grain mill products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 11
A 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 12
A 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 13
A 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 14
A 15	Miscellaneous agri processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 15
A 16	Chemicals and fertilizers	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 16
A 17	Petroleum	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 17
A 18	Fabricated metals and machinery	0.000048	0.000052	0.000043	0.000311	0.000067	0.000120	0.000182	0.000094	0.000179	0.000064	0.000032	0.000019	0.000023	0.000413	0.000072	0.000072	0.000071	0.000653	0.000208	A 18
A 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 19
A 20	Primary metals	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 20
A 21	Other manufacturing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 21
A 22	Mining	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000007	0.000002	0.000003	0.000002	0.000002	0.000026	0.000038	0.000002	0.000000	A 22
A 23	Utilities	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 23
A 24	Selected services	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 24
A 25	Trade and transportation	0.000038	0.000041	0.000061	0.000040	0.000017	0.000020	0.000022	0.000013	0.000019	0.000018	0.000045	0.000049	0.000081	0.000079	0.000194	0.000092	0.000044	0.000047	0.000015	A 25
A 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 26

(Continued on next page.)

TABLE 7 continued.

Sector number	Sector title	C 20 Primary metals	C 21 Other mfg.	C 22 Mining	C 23 Utilities	C 24 Selected services	C 25 Trade and trans.	C 26 Unal-located	A 1 Meat animals	A 2 Poultry and eggs	A 3 Farm dairy prod.	A 4 Grains	A 5 Cotton	A 6 Veg.	A 7 Fruit and nuts	A 8 Citrus	A 9 Forage	A 10 Misc. agri.	A 11 Grain mill prod.	A 12 Meat & poultry proc.	Sector number
C 1	Meat animals and products	-0.000000	0.000013	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.051736	C 1
C 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.255636	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.004108	C 2
C 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000233	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 3
C 4	Food and feed grains	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001715	0.013305	0.009365	0.002024	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000818	0.021312	-0.000000	C 4
C 5	Cotton	-0.000000	0.000133	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 5
C 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 6
C 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 7
C 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 8
C 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 9
C 10	Miscellaneous agriculture	-0.000000	0.000741	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000035	-0.000000	0.000039	0.000178	0.000756	0.000068	-0.000000	0.000505	0.000117	0.000112	-0.000000	-0.000000	C 10
C 11	Grain mill products	-0.000000	0.000003	-0.000000	-0.000000	-0.000000	0.000018	0.000059	0.002619	0.086362	0.016942	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.007519	-0.000000	C 11
C 12	Meat and poultry processing	-0.000000	0.000373	-0.000000	-0.000000	0.000041	0.000207	0.002531	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 12
C 13	Dairy products	-0.000000	0.000025	-0.000000	-0.000000	0.000028	0.000141	0.000069	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 13
C 14	Canning, preserving, freezing	-0.000000	0.000028	-0.000000	-0.000000	0.000020	0.000105	0.000053	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 14
C 15	Miscellaneous agri. processing	0.000156	0.000322	0.000005	-0.000000	0.000036	0.000108	0.000605	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.008723	-0.000000	C 15
C 16	Chemicals and fertilizers	0.009338	0.032407	0.011853	0.000212	0.004541	0.000504	0.003562	0.000105	0.000370	0.000194	0.014985	0.006698	0.004846	0.008235	0.004162	0.003765	0.001711	0.009195	0.002233	C 16
C 17	Petroleum	0.006046	0.004884	0.017637	0.007008	0.005643	0.016509	0.003564	0.000042	0.000493	-0.000000	0.002024	0.000584	0.000406	0.001765	0.001010	0.000788	0.000260	0.000086	0.000058	C 17
C 18	Fabricated metals and machinery	0.038649	0.025350	0.038357	0.006647	0.037279	0.005475	0.009001	0.000392	0.000370	0.000583	0.007386	0.001333	0.001178	0.002941	0.002222	0.003006	0.003979	0.000344	0.000116	C 18
C 19	Aircraft and parts	0.000066	0.001961	-0.000000	-0.000000	0.131656	0.001992	0.009798	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 19
C 20	Primary metals	0.152297	0.013852	0.017465	0.000717	0.000150	0.000403	0.001190	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 20
C 21	Other manufacturing	0.014056	0.194796	0.034279	0.019389	0.035064	0.009838	0.036168	0.000049	0.000370	0.000039	0.000142	0.000080	0.001517	0.001176	0.000707	0.000058	0.000186	0.001590	0.000213	C 21
C 22	Mining	0.091384	0.010459	0.086208	0.000058	0.000205	0.000240	0.001147	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 22
C 23	Utilities	0.021002	0.011511	0.021887	0.144401	0.010552	0.021604	0.014783	0.000091	0.000123	0.000155	0.000107	0.000166	0.000095	-0.000000	0.000101	0.000058	0.000112	0.000086	0.000116	C 23
C 24	Selected services	0.003887	0.005245	0.001787	0.001300	0.049802	0.018514	0.014397	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 24
C 25	Trade and transportation	0.075203	0.069031	0.037800	0.012786	0.035508	0.034738	0.035907	0.001225	-0.000000	0.005265	0.000107	0.000126	0.000068	0.000588	0.000202	0.000058	0.001079	0.004340	0.008952	C 25
C 26	Unallocated	0.025031	0.051910	0.048602	0.080306	0.157312	0.133028	0.128749	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 26
A 1	Meat animals and products	-0.000000	0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.567319	A 1
A 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.107182	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001725	A 2
A 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.026345	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 3
A 4	Food and feed grains	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.022937	0.177652	0.125277	0.027144	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.011008	0.284965	-0.000000	A 4
A 5	Cotton	-0.000000	0.000008	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001253	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 5
A 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.003941	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 6
A 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 7
A 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000909	-0.000000	-0.000000	-0.000000	-0.000000	A 8
A 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.163432	-0.000000	0.175636	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.068698	-0.000000	-0.000000	A 9
A 10	Miscellaneous agriculture	-0.000000	0.000001	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.004467	-0.000000	0.004507	0.024430	0.095680	0.009236	0.020000	0.060713	0.013047	0.012198	-0.000000	-0.000000	A 10
A 11	Grain mill products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.011891	2.344392	0.071770	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.031839	-0.000000	A 11
A 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001074	0.047105	A 12
A 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.002793	0.002170	A 13
A 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 14
A 15	Miscellaneous agri. processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.012890	-0.000000	A 15
A 16	Chemicals and fertilizers	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000252	0.000862	0.000466	0.036539	0.016327	0.011823	0.020000	0.015092	0.009194	0.004165	0.022388	0.000581	A 16
A 17	Petroleum	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000042	0.000493	-0.000000	0.002131	0.000617	0.000433	0.001765	0.001111	0.000817	0.000260	0.000086	0.000058	A 17
A 18	Fabricated metals and machinery	0.000151	0.000099	0.000140	0.000026	0.000146	0.000022	0.000035	0.000609	0.000616	0.000894	0.011505	0.002069	0.001828	0.004118	0.003435	0.004670	0.006174	0.000559	0.000194	A 18
A 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 19
A 20	Primary metals	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000014	-0.000000	0.000039	-0.000000	0.000020	0.000014	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 20
A 21	Other manufacturing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000385	0.003203	0.000427	0.001207	0.000630	0.011945	0.008824	0.005960	0.000496	0.001376	0.012547	0.001647	A 21
A 22	Mining	0.000280	0.000032	0.000263	-0.000000	0.000001	0.000001	0.000004	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000019	A 22
A 23	Utilities	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.005685	0.007515	0.006743	0.005859	0.010226	0.005444	0.010000	0.006768	0.003357	0.005988	0.004426	0.007034	A 23
A 24	Selected services	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.002199	0.001478	0.001671	0.001243	0.000729	0.000637	0.002353	0.001515	0.000438	0.000632	0.002621	0.004825	A 24
A 25	Trade and transportation	0.000071	0.000065	0.000035	0.000012	0.000034	0.000033	0.000034	0.012428	0.000370	0.053818	0.001101	0.001247	0.000677	0.003529	0.002020	0.000701	0.011083	0.043957	0.091052	A 25
A 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.035358	0.014414	0.027861	0.070521	0.053676	0.023104	0.055294	0.036367	0.033888	0.032578	0.026511	0.042028	A 26

(Continued on next page.)

TABLE 7 continued.

Sector number	Sector title	A 13 Dairy prod.	A 14 Canning, preserving, freezing	A 15 Misc. agri. proc.	A 16 Chem. and fert.	A 17 Petro-leum	A 18 Fab. metals & mach.	A 19 Air-craft	A 20 Primary metals	A 21 Other mfg.	A 22 Mining	A 23 Utilities	A 24 Selected services	A 25 Trade and trans.	A 26 Unal-located	Sector number
C 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 1
C 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 2
C 3	Farm dairy products	0.003684	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 3
C 4	Food and feed grains	-0.000000	-0.000000	0.000139	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 4
C 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 5
C 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 6
C 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	0.003231	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 7
C 8	Citrus	-0.000000	0.001923	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 8
C 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 9
C 10	Miscellaneous agriculture	-0.000000	-0.000000	0.000119	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000097	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 10
C 11	Grain mill products	0.000152	0.001442	0.023230	0.002567	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000005	0.000006	0.000099	C 11
C 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 12
C 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 13
C 14	Canning, preserving, freezing	-0.000000	0.110550	0.010802	0.003928	-0.000000	-0.000000	-0.000000	-0.000000	0.000097	-0.000000	-0.000000	0.000162	0.000262	0.003983	C 14
C 15	Miscellaneous agri. processing	0.001062	0.007690	0.014152	0.014248	-0.000000	-0.000000	-0.000000	-0.000000	0.000040	-0.000000	-0.000000	0.000057	0.000082	0.001361	C 15
C 16	Chemicals and fertilizers	0.001669	0.008652	0.008582	0.024722	0.004148	0.000606	0.000223	0.001375	0.001781	0.004639	0.000043	0.000782	0.000065	0.000208	C 16
C 17	Petroleum	0.000152	0.000240	0.000178	0.000642	0.002262	0.000101	0.000071	0.000128	0.000165	0.000277	0.000277	0.000205	0.000493	0.000101	C 17
C 18	Fabricated metals and machinery	0.000368	0.000240	0.000277	0.000770	0.001508	0.061143	0.034424	0.008369	0.003720	0.001335	0.003867	0.011037	0.000851	0.003848	C 18
C 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 19
C 20	Primary metals	-0.000000	0.000240	0.000139	0.000513	-0.000000	0.005225	0.002688	0.027491	0.000415	0.000827	0.000117	0.000024	0.000035	0.000125	C 20
C 21	Other manufacturing	0.002167	0.002403	0.000951	0.001053	0.000377	0.002496	0.002008	0.001040	0.019256	0.001631	0.000491	0.001706	0.000544	0.003255	C 21
C 22	Mining	-0.000000	-0.000000	-0.000000	0.000103	-0.000000	-0.000000	-0.000000	0.002050	0.000398	0.004989	0.000005	-0.000000	-0.000000	0.000001	C 22
C 23	Utilities	0.000130	0.000240	0.000099	0.000334	0.000377	0.000152	0.000142	0.000408	0.000256	0.000461	0.001685	0.000281	0.000433	0.000273	C 23
C 24	Selected services	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 24
C 25	Trade and transportation	0.007824	0.007690	0.007334	0.006341	0.004033	0.005235	0.002495	0.005425	0.006530	0.003634	0.002027	0.006477	0.003383	0.003059	C 25
C 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	C 26
A 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 1
A 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 2
A 3	Farm dairy products	0.447315	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 3
A 4	Food and feed grains	-0.000000	-0.000000	0.001982	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 4
A 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 5
A 6	Vegetables	-0.000000	0.017863	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 6
A 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	0.002160	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 7
A 8	Citrus	-0.000000	0.040375	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 8
A 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 9
A 10	Miscellaneous agriculture	-0.000000	-0.000000	0.015321	0.001155	-0.000000	-0.000000	-0.000000	-0.000000	0.012412	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	A 10
A 11	Grain mill products	0.000607	0.006008	0.098527	0.010885	-0.000000	-0.000000	-0.000000	-0.000000	0.000006	-0.000000	-0.000000	0.000014	0.000025	0.000418	A 11
A 12	Meat and poultry processing	-0.000000	0.003845	0.007809	0.004159	-0.000000	-0.000000	-0.000000	-0.000000	0.000165	-0.000000	-0.000000	0.000086	0.000122	0.002019	A 12
A 13	Dairy products	0.097612	0.005287	0.004876	0.002567	-0.000000	-0.000000	-0.000000	-0.000000	0.000017	-0.000000	-0.000000	0.000076	0.000112	0.001836	A 13
A 14	Canning, preserving, freezing	-0.000000	0.006489	0.000634	0.000731	-0.000000	-0.000000	-0.000000	-0.000000	0.000006	-0.000000	-0.000000	0.000010	0.000014	0.000229	A 14
A 15	Miscellaneous agri. processing	0.001560	0.011295	0.020871	0.021000	-0.000000	-0.000000	-0.000000	-0.000000	0.000063	-0.000000	-0.000000	0.000081	0.000122	0.002008	A 15
A 16	Chemicals and fertilizers	0.004074	0.021149	0.020930	0.060252	0.010181	0.001486	0.000538	0.003357	0.004335	0.011309	0.000101	0.001986	0.000157	0.000507	A 16
A 17	Petroleum	0.000152	0.000240	0.000178	0.000667	0.002262	0.000111	0.000071	0.000134	0.000176	0.000289	0.000293	0.000214	0.000519	0.000106	A 17
A 18	Fabricated metals and machinery	0.000585	0.000481	0.000416	0.001181	0.002262	0.095080	0.056449	0.013016	0.005785	0.002076	0.006011	0.017164	0.001323	0.005985	A 18
A 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	0.000026	-0.000000	0.004568	0.191624	0.000024	0.001013	-0.000000	-0.000000	0.009732	0.001260	0.005725	A 19
A 20	Primary metals	-0.000000	0.001682	0.001526	0.005879	-0.000000	0.060759	0.031231	0.319671	0.004824	0.009618	0.001371	0.000267	0.000398	0.001449	A 20
A 21	Other manufacturing	0.017164	0.018025	0.007472	0.008266	0.003394	0.019687	0.015823	0.008187	0.151771	0.012867	0.003883	0.013458	0.004285	0.025651	A 21
A 22	Mining	0.000022	-0.000000	0.000020	0.003979	0.003771	0.000152	-0.000000	0.089261	0.017327	0.217398	0.000235	0.000005	0.000013	0.000042	A 22
A 23	Utilities	0.007499	0.007450	0.006481	0.020640	0.015460	0.009075	0.008906	0.024815	0.015604	0.028065	0.102879	0.017262	0.026501	0.016694	A 23
A 24	Selected services	0.008344	0.004326	0.002953	0.005314	0.001131	0.002476	0.000294	0.001569	0.005194	0.001094	0.001573	0.054997	0.016598	0.011259	A 24
A 25	Trade and transportation	0.079537	0.078347	0.074465	0.064462	0.042594	0.053179	0.029388	0.055104	0.066329	0.036920	0.020597	0.065791	0.034376	0.031081	A 25
A 26	Unallocated	0.045143	0.046383	0.064397	0.051601	0.045626	0.053796	0.071468	0.027534	0.058928	0.089280	0.137215	0.115445	0.146786	0.140897	A 26

a/ Each entry shows dollars of direct purchases from the California or Arizona sector listed at the left by the California or Arizona sector listed at the top per dollar of output of the latter sector.

TABLE 8

Direct and Indirect Requirements Per Dollar of Final Demand, California-Arizona Economy, 1958[a/]

Sector number	Sector title	C 1 Meat animals	C 2 Poultry and eggs	C 3 Farm dairy prod.	C 4 Grains	C 5 Cotton	C 6 Veg.	C 7 Fruit and nuts	C 8 Citrus	C 9 Forage	C 10 Misc. agri.	C 11 Grain mill prod	C 12 Meat & poultry proc.	C 13 Dairy prod.	C 14 Canning, preserving, freezing	C 15 Misc. agri. proc.	C 16 Chem. and fert.	C 17 Petro-leum	C 18 Fab. metals & mach.	C 19 Air-craft	Sector number
C 1	Meat animals and products	1.000155	0.000422	0.000173	0.000210	0.000129	0.000124	0.000144	0.000084	0.000107	0.000067	0.001039	0.382038	0.000484	0.002860	0.004110	0.001321	0.000278	0.000115	0.000040	C 1
C 2	Poultry and eggs	0.000035	1.215768	0.000039	0.000039	0.000024	0.000024	0.000028	0.000017	0.000020	0.000012	0.000276	0.064567	0.000272	0.000579	0.002546	0.000289	0.000051	0.000028	0.000007	C 2
C 3	Farm dairy products	0.000137	0.000566	1.027157	0.000035	0.000020	0.000026	0.000036	0.000021	0.000018	0.000013	0.001680	0.001359	0.464407	0.003041	0.002247	0.000502	0.000036	0.000016	0.000006	C 3
C 4	Food and feed grains	0.077002	0.169896	0.067570	1.028895	0.000257	0.000148	0.000117	0.000082	0.000103	0.001758	0.208221	0.038524	0.031448	0.001918	0.011124	0.000974	0.000069	0.000025	0.000008	C 4
C 5	Cotton	0.000002	0.000005	0.000002	0.000003	1.002330	0.000005	0.000006	0.000004	0.000002	0.000002	0.000007	0.000003	0.000008	0.000012	0.000005	0.000008	0.000004	0.000007	0.000004	C 5
C 6	Vegetables	0.000004	0.000011	0.000004	0.000005	0.000003	1.003267	0.000005	0.000003	0.000003	0.000002	0.000027	0.000004	0.000035	0.107832	0.004429	0.000066	0.000005	0.000003	0.000001	C 6
C 7	Fruit (excluding citrus) & nuts	0.000128	0.000510	0.000143	0.000065	0.000037	0.000053	1.000076	0.000046	0.000034	0.000021	0.001503	0.000090	0.001988	0.169311	0.027397	0.001208	0.000049	0.000022	0.000007	C 7
C 8	Citrus	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000002	0.000000	0.000003	0.009776	0.000039	0.000006	0.000000	0.000080	0.000000	C 8
C 9	Forage	0.208620	0.004197	0.244022	0.000843	0.002303	0.001070	0.000571	0.000471	1.000347	0.017977	0.012467	0.080212	0.110491	0.002261	0.002339	0.000625	0.000077	0.000032	0.000011	C 9
C 10	Miscellaneous agriculture	0.016646	0.008424	0.021194	0.045672	0.131404	0.060000	0.030682	0.025869	0.041666	1.039596	0.011715	0.006937	0.012024	0.050698	0.030849	0.011134	0.000470	0.000201	0.000068	C 10
C 11	Grain mill products	0.075693	0.333070	0.085459	0.000249	0.000262	0.000226	0.000258	0.000163	0.000150	0.001239	1.013354	0.046730	0.041728	0.006475	0.036821	0.003527	0.000193	0.000067	0.000021	C 11
C 12	Meat and poultry processing	0.000422	0.001146	0.000471	0.000570	0.000349	0.000335	0.000390	0.000228	0.000290	0.000182	0.002824	1.039512	0.001314	0.007777	0.011182	0.003592	0.000754	0.000310	0.000109	C 12
C 13	Dairy products	0.000321	0.001325	0.000363	0.000081	0.000046	0.000061	0.000084	0.000050	0.000042	0.000029	0.003935	0.003183	1.087933	0.007123	0.005244	0.001177	0.000084	0.000038	0.000013	C 13
C 14	Canning, preserving, freezing	0.000037	0.000104	0.000042	0.000047	0.000026	0.000034	0.000047	0.000028	0.000024	0.000015	0.000253	0.000035	0.000331	1.016137	0.004044	0.000625	0.000051	0.000025	0.000009	C 14
C 15	Miscellaneous agri. processing	0.004858	0.019778	0.005418	0.002015	0.001142	0.001659	0.002384	0.001427	0.001056	0.000644	0.058815	0.003339	0.077948	0.052953	1.080157	0.038305	0.002194	0.000448	0.000198	C 15
C 16	Chemicals and fertilizers	0.016982	0.028328	0.016937	0.061187	0.034589	0.051796	0.075381	0.045217	0.032130	0.017413	0.048440	0.013005	0.039858	0.046859	0.031926	1.253677	0.048355	0.017051	0.005063	C 16
C 17	Petroleum	0.021045	0.042491	0.022128	0.091865	0.025574	0.039438	0.061590	0.030644	0.047917	0.020930	0.027256	0.017330	0.025434	0.033185	0.012983	0.007786	1.836731	0.013833	0.005885	C 17
C 18	Fabricated metals and machinery	0.038283	0.045380	0.038129	0.106787	0.026744	0.043406	0.063357	0.033195	0.059948	0.024563	0.037869	0.027449	0.032967	0.153779	0.036695	0.036033	0.047927	1.212787	0.083408	C 18
C 19	Aircraft and parts	0.003177	0.004249	0.003097	0.006084	0.002799	0.003312	0.004164	0.002295	0.003281	0.002064	0.003433	0.008785	0.005599	0.005499	0.004838	0.005341	0.005416	0.010132	1.254136	C 19
C 20	Primary metals	0.005620	0.007077	0.005611	0.015030	0.004197	0.006700	0.009833	0.005254	0.008408	0.003676	0.006559	0.004484	0.006173	0.023060	0.006570	0.017167	0.008706	0.155017	0.044207	C 20
C 21	Other manufacturing	0.015882	0.034795	0.017007	0.025262	0.012654	0.037362	0.045302	0.027410	0.013516	0.012774	0.056198	0.019938	0.063260	0.090924	0.038692	0.056867	0.028669	0.055218	0.027235	C 21
C 22	Mining	0.001530	0.002987	0.001599	0.003995	0.001419	0.002383	0.003252	0.001803	0.002150	0.001114	0.004861	0.001881	0.003533	0.005412	0.002772	0.014198	0.027130	0.017446	0.005126	C 22
C 23	Utilities	0.012390	0.019216	0.014461	0.015371	0.011764	0.013225	0.018050	0.010657	0.008978	0.013382	0.012495	0.015643	0.021567	0.021473	0.018002	0.026926	0.033365	0.019359	0.010518	C 23
C 24	Selected services	0.011660	0.015150	0.010209	0.020474	0.008251	0.012213	0.016657	0.009109	0.011410	0.007485	0.010996	0.042127	0.020216	0.015853	0.014264	0.017154	0.012278	0.007821	0.003250	C 24
C 25	Trade and transportation	0.064616	0.123100	0.091587	0.070553	0.033285	0.039662	0.047986	0.027833	0.037234	0.027779	0.088638	0.094550	0.167118	0.137323	0.249134	0.150113	0.109843	0.085668	0.032500	C 25
C 26	Unallocated	0.066688	0.087809	0.074008	0.147547	0.094386	0.068257	0.064587	0.036651	0.073618	0.047055	0.083549	0.112776	0.121269	0.111830	0.126619	0.138732	0.224028	0.085652	0.029720	C 26
A 1	Meat animals and products	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000108	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	A 1
A 2	Poultry and eggs	0.000000	0.000054	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000017	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	A 2
A 3	Farm dairy products	0.000001	0.000001	0.000041	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003	0.000002	0.000691	0.000005	0.000003	0.000001	0.000000	0.000000	0.000000	A 3
A 4	Food and feed grains	0.000999	0.002216	0.000883	0.000373	0.000006	0.000003	0.000002	0.000002	0.000002	0.000023	0.002698	0.000508	0.000512	0.000027	0.000146	0.000013	0.000001	0.000000	0.000000	A 4
A 5	Cotton	0.000000	0.000000	0.000000	0.000000	0.000141	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	A 5
A 6	Vegetables	0.000000	0.000000	0.000000	0.000000	0.000000	0.000013	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000438	0.000002	0.000000	0.000000	0.000000	0.000000	A 6
A 7	Fruit (excluding citrus) & nuts	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 7
A 8	Citrus	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000147	0.000001	0.000000	0.000000	0.000000	0.000000	A 8
A 9	Forage	0.002898	0.000063	0.003396	0.000017	0.000046	0.000021	0.000011	0.000009	0.000015	0.000254	0.000179	0.001132	0.001656	0.000038	0.000037	0.000010	0.000001	0.000001	0.000000	A 9
A 10	Miscellaneous agriculture	0.000088	0.000069	0.000098	0.000078	0.000208	0.000090	0.000046	0.000041	0.000062	0.000064	0.000087	0.000038	0.000055	0.000090	0.000050	0.000017	0.000001	0.000001	0.000000	A 10
A 11	Grain mill products	0.000001	0.000022	0.000004	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000002	0.000008	0.000052	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	A 11
A 12	Meat and poultry processing	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 12
A 13	Dairy products	0.000001	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 13
A 14	Canning, preserving, freezing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 14
A 15	Miscellaneous agri. processing	0.000002	0.000003	0.000002	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003	0.000001	0.000002	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	A 15
A 16	Chemicals and fertilizers	0.000068	0.000089	0.000069	0.000016	0.000004	0.000001	0.000001	0.000001	0.000001	0.000004	0.000108	0.000032	0.000039	0.000012	0.000007	0.000002	0.000002	0.000003	0.000001	A 16
A 17	Petroleum	0.000005	0.000005	0.000005	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000006	0.000002	0.000003	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	A 17
A 18	Fabricated metals and machinery	0.000197	0.000230	0.000199	0.000472	0.000120	0.000191	0.000277	0.000146	0.000262	0.000108	0.000205	0.000133	0.000162	0.000672	0.000155	0.000158	0.000209	0.000924	0.000369	A 18
A 19	Aircraft and parts	0.000003	0.000003	0.000003	0.000004	0.000001	0.000001	0.000002	0.000001	0.000002	0.000001	0.000004	0.000007	0.000003	0.000005	0.000002	0.000002	0.000002	0.000006	0.000002	A 19
A 20	Primary metals	0.000019	0.000022	0.000020	0.000043	0.000011	0.000017	0.000025	0.000013	0.000024	0.000010	0.000021	0.000013	0.000016	0.000061	0.000015	0.000015	0.000021	0.000085	0.000033	A 20
A 21	Other manufacturing	0.000017	0.000019	0.000018	0.000016	0.000005	0.000006	0.000009	0.000005	0.000008	0.000004	0.000020	0.000010	0.000015	0.000029	0.000008	0.000007	0.000009	0.000028	0.000011	A 21
A 22	Mining	0.000009	0.000015	0.000009	0.000021	0.000007	0.000011	0.000016	0.000009	0.000011	0.000005	0.000022	0.000010	0.000016	0.000029	0.000013	0.000058	0.000109	0.000079	0.000024	A 22
A 23	Utilities	0.000030	0.000031	0.000033	0.000015	0.000007	0.000006	0.000007	0.000004	0.000007	0.000005	0.000034	0.000017	0.000031	0.000023	0.000013	0.000010	0.000011	0.000021	0.000008	A 23
A 24	Selected services	0.000008	0.000010	0.000009	0.000005	0.000002	0.000002	0.000002	0.000001	0.000002	0.000002	0.000011	0.000006	0.000010	0.000007	0.000006	0.000004	0.000004	0.000007	0.000003	A 24
A 25	Trade and transportation	0.000095	0.000158	0.000126	0.000107	0.000044	0.000053	0.000068	0.000037	0.000054	0.000037	0.000126	0.000112	0.000229	0.000185	0.000259	0.000161	0.000127	0.000149	0.000057	A 25
A 26	Unallocated	0.000241	0.000246	0.000260	0.000091	0.000037	0.000029	0.000035	0.000020	0.000033	0.000030	0.000285	0.000128	0.000195	0.000111	0.000075	0.000048	0.000048	0.000100	0.000038	A 26

(Continued on next page.)

TABLE 8 continued.

Sector number	Sector title	C 20 Primary metals	C 21 Other mfg.	C 22 Mining	C 23 Utilities	C 24 Selected services	C 25 Trade and trans.	C 26 Unal-located	A 1 Meat animals	A 2 Poultry and eggs	A 3 Farm dairy prod.	A 4 Grains	A 5 Cotton	A 6 Veg.	A 7 Fruit and nuts	A 8 Citrus	A 9 Forage	A 10 Misc. agri.	A 11 Grain mill prod.	A 12 Meat & poultry proc.	Sector number
C 1	Meat animals and products	0.000103	0.000328	0.000117	0.000124	0.000254	0.000259	0.001152	0.000015	0.000305	0.000050	0.000049	0.000026	0.000016	0.000030	0.000022	0.000015	0.000013	0.000162	0.054328	C 1
C 2	Poultry and eggs	0.000019	0.000056	0.000021	0.000021	0.000044	0.000044	0.000196	0.000003	0.348153	0.000011	0.000010	0.000005	0.000003	0.000006	0.000004	0.000003	0.000002	0.000043	0.005877	C 2
C 3	Farm dairy products	0.000018	0.000047	0.000016	0.000008	0.000032	0.000078	0.000051	0.000007	0.000354	0.000284	0.000013	0.000007	0.000004	0.000008	0.000006	0.000004	0.000003	0.000061	0.000028	C 3
C 4	Food and feed grains	0.000027	0.000078	0.000028	0.000016	0.000038	0.000040	0.000135	0.002656	0.094913	0.015697	0.002237	0.005121	0.000032	0.000060	0.000086	0.000032	0.000891	0.025207	0.006694	C 4
C 5	Cotton	0.000005	0.000167	0.000007	0.000005	0.000009	0.000003	0.000007	0.000000	0.000003	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	C 5
C 6	Vegetables	0.000003	0.000008	0.000002	0.000001	0.000005	0.000013	0.000008	0.000026	0.000057	0.000040	0.000060	0.000040	0.000020	0.000042	0.000030	0.000023	0.000024	0.000072	0.000051	C 6
C 7	Fruit (excluding citrus) & nuts	0.000028	0.000072	0.000025	0.000007	0.000024	0.000031	0.000040	0.000054	0.000524	0.000124	0.000135	0.000082	0.000045	0.000089	0.000064	0.000048	0.000045	0.000455	0.000101	C 7
C 8	Citrus	0.000000	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	0.000002	0.000005	0.000004	0.000005	0.000004	0.000002	0.000004	0.000003	0.000002	0.000002	0.000007	0.000005	C 8
C 9	Forage	0.000030	0.000107	0.000033	0.000029	0.000064	0.000074	0.000256	0.000041	0.002580	0.000305	0.000025	0.000024	0.000008	0.000012	0.000018	0.000008	0.000007	0.001179	0.011381	C 9
C 10	Miscellaneous agriculture	0.000205	0.001475	0.000235	0.000059	0.000165	0.000070	0.000164	0.000223	0.005045	0.000936	0.000530	0.000919	0.000153	0.000142	0.000639	0.000189	0.000212	0.001708	0.001109	C 10
C 11	Grain mill products	0.000076	0.000207	0.000077	0.000028	0.000075	0.000078	0.000206	0.002782	0.197064	0.018364	0.000240	0.000116	0.000077	0.000135	0.000102	0.000065	0.000044	0.008803	0.007607	C 11
C 12	Meat and poultry processing	0.000278	0.000848	0.000316	0.000335	0.000689	0.000704	0.003132	0.000020	0.000717	0.000093	0.000079	0.000036	0.000026	0.000045	0.000033	0.000021	0.000016	0.000214	0.000055	C 12
C 13	Dairy products	0.000043	0.000109	0.000038	0.000018	0.000074	0.000183	0.000120	0.000016	0.000814	0.000086	0.000029	0.000114	0.000009	0.000016	0.000012	0.000008	0.000006	0.000110	0.000039	C 13
C 14	Canning, preserving, freezing	0.000027	0.000078	0.000024	0.000012	0.000049	0.000125	0.000078	0.000248	0.000539	0.000374	0.000563	0.000475	0.000189	0.000395	0.000281	0.000219	0.000222	0.000680	0.000477	C 14
C 15	Miscellaneous agri. processing	0.000861	0.002121	0.000747	0.000188	0.000577	0.000385	0.001063	0.000462	0.016603	0.002287	0.001469	0.000758	0.000472	0.000829	0.000623	0.000397	0.000274	0.011823	0.000840	C 15
C 16	Chemicals and fertilizers	0.018890	0.052689	0.020929	0.002902	0.011368	0.003577	0.008249	0.002042	0.027386	0.007076	0.021211	0.004410	0.006761	0.011422	0.008676	0.005240	0.003141	0.021445	0.002819	C 16
C 17	Petroleum	0.022333	0.016515	0.039583	0.017111	0.016461	0.033860	0.010545	0.000828	0.019891	0.002854	0.004466	0.001359	0.000919	0.003543	0.002119	0.001605	0.000908	0.004300	0.002475	C 17
C 18	Fabricated metals and machinery	0.065675	0.044455	0.057136	0.012876	0.066220	0.012426	0.017771	0.002419	0.024949	0.006146	0.012147	0.001338	0.002329	0.005256	0.004219	0.004678	0.006669	0.008278	0.004916	C 18
C 19	Aircraft and parts	0.003276	0.006405	0.002634	0.002371	0.181458	0.008821	0.017959	0.000466	0.001869	0.000259	0.000226	0.000083	0.000066	0.000123	0.000092	0.000071	0.000090	0.000405	0.000341	C 19
C 20	Primary metals	1.159905	0.027420	0.031394	0.003499	0.014914	0.003641	0.005475	0.000392	0.004057	0.001000	0.001986	0.000611	0.000467	0.000933	0.000736	0.000734	0.000968	0.001510	0.000804	C 20
C 21	Other manufacturing	0.035339	1.252725	0.056196	0.034893	0.064485	0.023462	0.056075	0.000891	0.019479	0.002732	0.002503	0.001223	0.002897	0.003029	0.002044	0.000849	0.001695	0.005750	0.002736	C 21
C 22	Mining	0.121055	0.017951	1.099029	0.001248	0.003164	0.001580	0.002912	0.000095	0.001763	0.000306	0.000514	0.000123	0.000171	0.000303	0.000222	0.000164	0.000164	0.000547	0.000216	C 22
C 23	Utilities	0.038412	0.023574	0.034134	1.175198	0.021934	0.030924	0.023280	0.000384	0.008072	0.001168	0.001016	0.000603	0.000411	0.000548	0.000527	0.000341	0.000440	0.001632	0.001617	C 23
C 24	Selected services	0.009260	0.012217	0.005642	0.004291	1.079777	0.023935	0.019761	0.000162	0.006315	0.000725	0.000478	0.000196	0.000149	0.000268	0.000198	0.000129	0.000150	0.001170	0.001078	C 24
C 25	Trade and transportation	0.110925	0.165044	0.060395	0.024791	0.062510	1.048648	0.052050	0.002598	0.051924	0.010534	0.004960	0.002352	0.001724	0.001482	0.002394	0.001515	0.062530	0.013685	0.016585	C 25
C 26	Unallocated	0.071855	0.076412	0.086417	0.117057	0.217709	0.172978	1.167008	0.001297	0.040384	0.005572	0.004281	0.001707	0.001267	0.002430	0.001779	0.001218	0.001330	0.009144	0.006870	C 26
A 1	Meat animals and products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000086	0.000450	0.000173	0.000219	0.000135	0.000073	0.000146	0.000105	0.000078	0.000074	0.000918	0.595511	A 1
A 2	Poultry and eggs	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.120067	0.000001	0.000001	0.000000	0.000030	0.000000	0.000000	0.000000	0.000000	0.000003	0.002028	A 2
A 3	Farm dairy products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000075	0.000721	1.027256	0.000145	0.000094	0.000048	0.000099	0.000071	0.000055	0.000054	0.001632	0.001282	A 3
A 4	Food and feed grains	0.000000	0.000001	0.000000	0.000000	0.000001	0.000001	0.000002	0.027068	0.330117	0.154862	1.028420	0.001204	0.000176	0.000351	0.000288	0.000209	0.011512	0.303548	0.016985	A 4
A 5	Cotton	0.000000	0.000010	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.001255	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 5
A 6	Vegetables	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000001	0.000001	0.000001	1.003957	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	A 6
A 7	Fruit (excluding citrus) & nuts	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000014	0.000003	0.000002	0.000001	0.000001	1.000001	0.000001	0.000001	0.000000	0.000032	0.000001	A 7
A 8	Citrus	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000001	0.000001	0.000001	0.000001	0.000000	0.000001	1.000911	0.000001	0.000001	0.000002	0.000001	A
A 9	Forage	0.000001	0.000002	0.000001	0.000000	0.000001	0.000001	0.000004	0.163968	0.000818	0.181212	0.001819	0.004714	0.003481	0.001448	0.004271	1.000934	0.069846	0.000992	0.098018	A 9
A 10	Miscellaneous agriculture	0.000001	0.000003	0.000001	0.000000	0.000000	0.000000	0.000000	0.007402	0.008489	0.011008	0.025591	0.097176	0.096815	0.020477	0.061736	0.013271	1.013609	0.008046	0.004509	A 10
A 11	Grain mill products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.011559	0.424882	0.076443	0.000816	0.000298	0.000198	0.000347	0.000261	0.000166	0.000113	1.034957	0.007808	A 11
A 12	Meat and poultry processing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000152	0.000793	0.000305	0.000385	0.000238	0.000129	0.000257	0.000185	0.000138	0.000130	0.001618	1.049700	A 12
A 13	Dairy products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000164	0.001569	0.000429	0.000315	0.000204	0.000105	0.000216	0.000154	0.000119	0.000117	0.003552	0.002790	A 13
A 14	Canning, preserving, freezing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000014	0.000027	0.000021	0.000032	0.000021	0.000011	0.000022	0.000016	0.000012	0.000013	0.000036	0.000027	A 14
A 15	Miscellaneous agri. processing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000341	0.006269	0.001385	0.001066	0.000541	0.000344	0.000619	0.000462	0.000304	0.000224	0.014588	0.000401	A 15
A 16	Chemicals and fertilizers	0.000007	0.000002	0.000005	0.000000	0.000001	0.000000	0.000000	0.003306	0.024334	0.010311	0.040303	0.018041	0.012809	0.021574	0.016500	0.009932	0.005702	0.037029	0.002803	A 16
A 17	Petroleum	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000258	0.001347	0.000545	0.002253	0.000682	0.000460	0.001812	0.001162	0.000840	0.000367	0.000815	0.000287	A 17
A 18	Fabricated metals and machinery	0.000287	0.000194	0.000249	0.000056	0.000288	0.000054	0.000078	0.002505	0.006280	0.004921	0.014199	0.003722	0.002537	0.005538	0.004836	0.005671	0.007924	0.005594	0.002711	A 18
A 19	Aircraft and parts	0.000003	0.000002	0.000002	0.000000	0.000002	0.000001	0.000001	0.000481	0.000659	0.000700	0.000798	0.000572	0.000281	0.000623	0.000436	0.000159	0.000429	0.000744	0.001076	A 19
A 20	Primary metals	0.000033	0.000019	0.000028	0.000005	0.000026	0.000005	0.000007	0.000465	0.001126	0.000887	0.001926	0.000761	0.000573	0.001002	0.000797	0.000732	0.000934	0.001253	0.000714	A 20
A 21	Other manufacturing	0.000018	0.000006	0.000015	0.000002	0.000009	0.000002	0.000003	0.002756	0.013950	0.004907	0.005265	0.003522	0.015400	0.011193	0.009087	0.002221	0.003546	0.019190	0.006736	A 21
A 22	Mining	0.000478	0.000072	0.000390	0.000005	0.000015	0.000007	0.000012	0.000139	0.000585	0.000277	0.000565	0.000270	0.000479	0.000535	0.000389	0.000193	0.000223	0.000772	0.000287	A 22
A 23	Utilities	0.000026	0.000009	0.000020	0.000002	0.000007	0.000003	0.000004	0.009012	0.016934	0.015955	0.010257	0.014255	0.007538	0.013877	0.009830	0.005141	0.008773	0.011813	0.018370	A 23
A 24	Selected services	0.000009	0.000003	0.000004	0.000001	0.000001	0.000001	0.000001	0.003492	0.004996	0.004471	0.002970	0.001989	0.001317	0.003782	0.002551	0.001147	0.001642	0.005606	0.010211	A 24
A 25	Trade and transportation	0.000150	0.000120	0.000094	0.000029	0.000081	0.000052	0.000057	0.016531	0.027136	0.065715	0.009211	0.007044	0.004287	0.009758	0.007031	0.003748	0.014732	0.056557	0.112890	A 25
A 26	Unallocated	0.000090	0.000043	0.000067	0.000010	0.000037	0.000014	0.000017	0.055890	0.071025	0.071878	0.093186	0.072123	0.031657	0.072479	0.050198	0.042883	0.047492	0.075054	0.106331	A 26

(Continued on next page)

TABLE 8 continued

Sector number	Sector title	A 13 Dairy prod.	A 14 Canning, preserving freezing	A 15 Misc. agri. proc.	A 16 Chem. and fert.	A 17 Petro-leum	A 18 Fab. metals & mach.	A 19 Air-craft	A 20 Primary metals	A 21 Other mfg.	A 22 Mining	A 23 Utilities	A 24 Selected services	A 25 Trade and trans.	A 26 Unal-located	Sector number
C 1	Meat animals and products	0.000051	0.000605	0.000602	0.000383	0.000022	0.000027	0.000027	0.000029	0.000042	0.000034	0.000027	0.000035	0.000035	0.000156	C 1
C 2	Poultry and eggs	0.000012	0.000115	0.000108	0.000081	0.000004	0.000004	0.000004	0.000005	0.000006	0.000006	0.000004	0.000005	0.000005	0.000022	C 2
C 3	Farm dairy products	0.004342	0.000393	0.000144	0.000084	0.000005	0.000005	0.000005	0.000006	0.000007	0.000008	0.000005	0.000007	0.000007	0.000029	C 3
C 4	Food and feed grains	0.008154	0.000964	0.007965	0.001804	0.000026	0.000017	0.000017	0.000024	0.000039	0.000039	0.000020	0.000026	0.000026	0.000119	C 4
C 5	Cotton	0.000001	0.000002	0.000031	0.000001	0.000000	0.000001	0.000001	0.000001	0.000004	0.000001	0.000000	0.000001	0.000000	0.000001	C 5
C 6	Vegetables	0.000063	0.012066	0.001268	0.000530	0.000038	0.000044	0.000056	0.000045	0.000064	0.000063	0.000081	0.000093	0.000109	0.000507	C 6
C 7	Fruit (excluding citrus) & nuts	0.000177	0.019225	0.005773	0.001365	0.000073	0.000077	0.000096	0.000084	0.000114	0.000120	0.000136	0.000159	0.000183	0.000850	C 7
C 8	Citrus	0.000006	0.003029	0.000116	0.000049	0.000003	0.000004	0.000005	0.000004	0.000006	0.000006	0.000007	0.000009	0.000010	0.000046	C 8
C 9	Forage	0.001160	0.000360	0.000488	0.000167	0.000008	0.000008	0.000008	0.000010	0.000015	0.000013	0.000008	0.000011	0.000011	0.000048	C 9
C 10	Miscellaneous agriculture	0.000650	0.006165	0.001862	0.001104	0.000081	0.000063	0.000060	0.000083	0.000226	0.000126	0.000054	0.000077	0.000070	0.000314	C 10
C 11	Grain mill products	0.009768	0.003054	0.025794	0.004213	0.000080	0.000046	0.000046	0.000071	0.000074	0.000119	0.000053	0.000073	0.000070	0.000320	C 11
C 12	Meat and poultry processing	0.000085	0.001017	0.001391	0.000329	0.000030	0.000041	0.000033	0.000044	0.000045	0.000043	0.000016	0.000027	0.000018	0.000067	C 12
C 13	Dairy products	0.000060	0.000863	0.000280	0.000165	0.000011	0.000010	0.000009	0.000013	0.000013	0.000016	0.000008	0.000012	0.000011	0.000045	C 13
C 14	Canning, preserving, freezing	0.000592	0.113698	0.011948	0.004999	0.000355	0.000410	0.000526	0.000428	0.000600	0.000593	0.000763	0.000879	0.001026	0.004777	C 14
C 15	Miscellaneous agri. processing	0.002806	0.015576	0.019749	0.018537	0.000494	0.000314	0.000316	0.000467	0.000505	0.000745	0.000349	0.000473	0.000460	0.002106	C 15
C 16	Chemicals and fertilizers	0.006524	0.018485	0.016724	0.034830	0.005891	0.002897	0.001966	0.005200	0.004559	0.008556	0.000444	0.001777	0.002449	0.001194	C 16
C 17	Petroleum	0.002408	0.005136	0.002829	0.002481	0.004609	0.001850	0.001379	0.002287	0.001377	0.001457	0.000929	0.001121	0.001281	0.000814	C 17
C 18	Fabricated metals and machinery	0.005224	0.019839	0.006325	0.004995	0.003197	0.085302	0.062925	0.021299	0.008667	0.004770	0.007347	0.018116	0.003238	0.008287	C 18
C 19	Aircraft and parts	0.000283	0.000841	0.002429	0.000371	0.000129	0.000832	0.000613	0.000420	0.000312	0.000168	0.000110	0.000254	0.000286	0.000169	C 19
C 20	Primary metals	0.000970	0.003619	0.001470	0.002133	0.000584	0.021265	0.014775	0.051597	0.002715	0.002902	0.001358	0.002796	0.003633	0.001617	C 20
C 21	Other manufacturing	0.006052	0.015796	0.006654	0.005478	0.001709	0.009278	0.008005	0.006308	0.030037	0.005058	0.002371	0.004881	0.002252	0.006854	C 21
C 22	Mining	0.000323	0.000990	0.000551	0.000864	0.000238	0.002667	0.001866	0.009581	0.001382	0.007505	0.000215	0.000413	0.000130	0.000315	C 22
C 23	Utilities	0.001432	0.003707	0.001904	0.002126	0.001043	0.002417	0.001854	0.003453	0.001605	0.001682	0.002597	0.001194	0.000953	0.001092	C 23
C 24	Selected services	0.000748	0.002385	0.001249	0.001158	0.000307	0.000872	0.000634	0.000849	0.000592	0.000383	0.000172	0.000386	0.000178	0.000320	C 24
C 25	Trade and transportation	0.016908	0.029209	0.019824	0.017864	0.008410	0.015206	0.010592	0.017112	0.012847	0.008425	0.006266	0.010471	0.009386	0.006749	C 25
C 26	Unallocated	0.005712	0.017377	0.009543	0.008609	0.002707	0.008436	0.006151	0.007998	0.004496	0.003374	0.001627	0.003299	0.001481	0.002555	C 26
A 1	Meat animals and products	0.000217	0.002535	0.005631	0.006871	0.000121	0.000128	0.000161	0.000138	0.000268	0.000199	0.000231	0.000270	0.000328	0.001444	A 1
A 2	Poultry and eggs	0.000001	0.000009	0.000017	0.000010	0.000000	0.000000	0.000001	0.000000	0.000001	0.000001	0.000001	0.000001	0.000001	0.000005	A 2
A 3	Farm dairy products	0.509308	0.002871	0.002842	0.001566	0.000086	0.000096	0.000123	0.000112	0.000125	0.000143	0.000179	0.000206	0.000240	0.001121	A 3
A 4	Food and feed grains	0.071089	0.002869	0.033534	0.004613	0.000076	0.000051	0.000058	0.000171	0.000246	0.000119	0.000073	0.000093	0.000097	0.000449	A 4
A 5	Cotton	0.000000	0.000000	0.000000	0.000010	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	A 5
A 6	Vegetables	0.000001	0.017292	0.000017	0.000007	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000007	A 6
A 7	Fruit (excluding citrus) & nuts	0.000006	0.000027	0.002211	0.000050	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000005	A 7
A 8	Citrus	0.000001	0.040693	0.000229	0.000012	0.000001	0.000001	0.000001	0.000001	0.000001	0.000001	0.000002	0.000002	0.000003	0.000012	A 8
A 9	Forage	0.089905	0.001152	0.002499	0.000680	0.000043	0.000065	0.000075	0.000060	0.001090	0.000081	0.000080	0.000102	0.000104	0.000470	A 9
A 10	Miscellaneous agriculture	0.005830	0.003328	0.017044	0.001939	0.000110	0.000392	0.000386	0.000282	0.014911	0.000339	0.000154	0.000309	0.000162	0.000533	A 10
A 11	Grain mill products	0.038903	0.008073	0.104797	0.014542	0.000205	0.000106	0.000113	0.000173	0.000181	0.000308	0.000143	0.000187	0.000191	0.000880	A 11
A 12	Meat and poultry processing	0.000382	0.004469	0.008868	0.005761	0.000212	0.000225	0.000285	0.000244	0.000473	0.000351	0.000407	0.000476	0.000544	0.002545	A 12
A 13	Dairy products	1.108592	0.006248	0.006187	0.003408	0.000188	0.000209	0.000267	0.000221	0.000272	0.000312	0.000389	0.000449	0.000522	0.002440	A 13
A 14	Canning, preserving, freezing	0.000033	1.006565	0.003686	0.002285	0.000020	0.000023	0.000030	0.000024	0.000034	0.000034	0.000044	0.000051	0.000059	0.000276	A 14
A 15	Miscellaneous agri. processing	0.002758	0.012432	1.023524	0.023247	0.000395	0.000258	0.000296	0.000364	0.000438	0.000608	0.000399	0.000496	0.000532	0.002474	A 15
A 16	Chemicals and fertilizers	0.010227	0.024390	0.026984	1.065486	0.011040	0.002494	0.001403	0.007539	0.006643	0.015727	0.000353	0.002465	0.000428	0.001021	A 16
A 17	Petroleum	0.000915	0.000392	0.001363	0.002799	1.002329	0.000203	0.000159	0.000336	0.000297	0.000448	0.000371	0.000307	0.000582	0.000171	A 17
A 18	Fabricated metals and machinery	0.004431	0.002110	0.002448	0.002896	0.003415	1.108211	0.079817	0.023038	0.009260	0.004770	0.009041	0.022660	0.003716	0.009210	A 18
A 19	Aircraft and parts	0.001273	0.000858	0.001018	0.000933	0.000681	0.007145	1.238535	0.001063	0.002542	0.001087	0.001495	0.014242	0.003250	0.008724	A 19
A 20	Primary metals	0.001168	0.003414	0.001230	0.010064	0.000791	0.099994	0.064657	1.474940	0.010114	0.019284	0.003649	0.003751	0.001669	0.004118	A 20
A 21	Other manufacturing	0.028258	0.025767	0.015089	0.014574	0.006956	0.030199	0.029884	0.020990	1.183742	0.024268	0.011318	0.023285	0.011671	0.036876	A 21
A 22	Mining	0.000861	0.001101	0.000882	0.006911	0.005143	0.012328	0.008080	0.168781	0.027415	1.280634	0.001019	0.000988	0.003493	0.001367	A 22
A 23	Utilities	0.022493	0.014623	0.014376	0.029919	0.021327	0.019044	0.019508	0.051574	0.026896	0.045601	1.119653	0.026931	0.035161	0.024692	A 23
A 24	Selected services	0.014905	0.007737	0.006851	0.008823	0.003427	0.005702	0.003249	0.005758	0.009505	0.004350	0.004755	1.061881	0.020787	0.015198	A 24
A 25	Trade and transportation	0.130251	0.091545	0.093035	0.080713	0.069674	0.073534	0.047865	0.098379	0.088880	0.058531	0.031954	0.082070	1.045275	0.044038	A 25
A 26	Unallocated	0.117220	0.081536	0.106890	0.089224	0.070934	0.092880	0.124715	0.090227	0.106379	0.124910	0.186741	0.165716	0.188571	1.182312	A 26

a/ Each entry shows dollars of direct and indirect requirements of the California or Arizona sector listed at the left per dollar of the final demand for products of California or Arizona sector listed at the top.

TABLE 9

A Measure of California Dependence on Arizona

California sectors		K^{ac} Partial effects a/	K^{c} Total effects b/	1 ÷ 2 Index of product dependence	Rank
Sector number	Sector title	1	2	3	4
1	Meat animals and products	.004684	1.646616	.002845	2
2	Poultry and eggs	.003259	2.169063	.001503	5
3	Farm dairy products	.005178	1.752008	.002956	1
4	Food and feed grains	.001260	1.644145	.000766	9
5	Cotton	.000639	1.394633	.000458	12
6	Vegetables	.000444	1.385411	.000321	18
7	Fruit (excluding citrus) and nuts	.000499	1.445487	.000345	17
8	Citrus	.000289	1.258847	.000230	22
9	Forage	.000483	1.343334	.000360	16
10	Miscellaneous agriculture	.000547	1.240339	.000441	14
11	Grain mill products	.003817	1.700230	.002245	3
12	Meat and poultry processing	.002279	2.026783	.001124	6
13	Dairy products	.003691	2.341098	.001577	4
14	Canning, preserving, freezing	.001884	2.086032	.000903	7
15	Miscellaneous agricultural processing	.000796	1.759841	.000452	13
16	Chemicals and fertilizers	.000506	1.787861	.000283	20
17	Petroleum	.000545	2.387331	.000228	23
18	Fabricated metals and machinery	.001406	1.682961	.000835	8
19	Aircraft	.000542	1.502493	.000361	15
20	Primary metals	.001099	1.699747	.000647	10
21	Other manufacturing	.000488	1.640646	.000297	19
22	Mining	.000878	1.496255	.000587	11
23	Utilities	.000110	1.397200	.000079	26
24	Selected services	.000472	1.742568	.000271	21
25	Trade and transportation	.000141	1.365480	.000103	25
26	Unallocated services	.000186	1.387881	.000134	24

a/ Indicates production generated in Arizona only due to one dollar change in final demand in specified California sectors.

b/ Indicates production generated in both California and Arizona due to one dollar change in final demand in specified California sectors.

mill products), 13 (Dairy products), and 2 (Poultry and eggs), respectively, are the five California sectors which are most dependent on Arizona sectors directly through importing from Arizona sectors and/or indirectly through buying from other California sectors which are themselves interdependent with other Arizona sectors.

Arizona dependence on California.--The comparable "total" and "partial" effects to show Arizona's dependence on California is presented in Table 10. Sectors 2 (Poultry and eggs), 14 (Canning, preserving, and freezing), 18 (Fabricated metals and machinery), 15 (Misc. agricultural processing), and 16 (Chemical and fertilizers) show the greatest relative product dependence on California.

Output multiplier effects.--The "total effects" (K^* vector defined above) can be interpreted as representing "output multipliers" for the 52 endogenous sectors in the combined two-state economy. A comparison of K^c and K^a (Table 9, column 2, and Table 10, column 2, respectively) indicates that the majority of California sectors (20 out of 26) have larger "output multipliers" than their corresponding Arizona counterparts. This implies that most of the California sectors would induce (both directly and indirectly) greater output for the combined two-state economy per dollar's delivery to final demand than their corresponding Arizona sectors.

However, it should be emphasized that these measures reflect the underlying assumption that all interrelated sectors have not exceeded their production capacities. To be able to answer the question of which is the optimum pattern for expanding the combined two-state economy, it would be necessary to expand the basic I-O model to incorporate restraints and criteria for deciding between the feasibility of expanding the requisite capacities as opposed to importing from outside.

Water Interdependence

In Table 11 estimates of the W^* matrix (see Equation 15) are presented which show, in millions of gallons, direct plus indirect water requirements of California or Arizona sectors listed on the left per $1,000 of final demand for the products of the sectors listed at the top. For example, the

TABLE 10

A Measure of Arizona Dependence on California

Arizona sectors		K^{ca} Partial effects a/	K^{a} Total effects b/	1 ÷ 2 Index of product dependence	
Sector number	Sector title				Rank
		1	2	3	4
1	Meat animals and products	.017749	1.323414	.013412	26
2	Poultry and eggs	.873685	2.936274	.297549	1
3	Farm dairy products	.077027	1.710689	.045027	12
4	Food and feed grains	.059232	1.298778	.045606	10
5	Cotton	.023572	1.254435	.018791	20
6	Vegetables	.018217	1.110893	.016399	22
7	Fruit (excluding citrus) and nuts	.033150	1.201308	.027595	16
8	Citrus	.024929	1.196709	.020831	19
9	Forage	.017578	1.105732	.015897	23
10	Miscellaneous agriculture	.019046	1.206302	.015789	24
11	Grain mill products	.117391	1.701741	.068983	6
12	Meat and poultry processing	.129049	2.170525	.059455	9
13	Dairy products	.074511	2.239140	.033277	13
14	Canning, preserving, freezing	.294466	1.656501	.177764	2
15	Miscellaneous agricultural processing	.143991	1.622442	.088750	4
16	Chemicals and fertilizers	.114120	1.482951	.076955	5
17	Petroleum	.030054	1.227249	.024489	18
18	Fabricated metals and machinery	.152093	1.605587	.094727	3
19	Aircraft	.111969	1.731637	.064661	7
20	Primary metals	.126518	2.070824	.061095	8
21	Other manufacturing	.070349	1.559467	.045111	11
22	Mining	.045912	1.628320	.028196	17
23	Utilities	.022967	1.395421	.016459	21
24	Selected services	.046595	1.453534	.032056	14
25	Trade and transportation	.018108	1.332446	.013590	25
26	Unallocated services	.039303	1.379694	.028487	15

a/ Indicates production generated in California only due to one dollar change in final demand in specified Arizona sectors.

b/ Indicates production generated in both California and Arizona due to one dollar change in final demand in specified Arizona sectors.

delivery to final demand of $1,000 of products from the meat and poultry processing sector in California (Sector C-12) requires 15,970 gallons of water for the meat animals and products (Sector C-1), 309 gallons for poultry and eggs (Sector C-2), 36 gallons for the dairy products (Sector C-3), and so forth, reading down column C-12. In total, 1,559,364 gallons of water are required from both California and Arizona. Similarly, comparisons can be made of the water intensiveness of different sectors within and between the states.

Table 12 shows a further summary of the various water coefficients and multipliers discussed previously. Specifically, we present estimates of (1) direct water coefficients (corresponding to Equations 12a and 12b); (2) direct plus indirect water coefficients (corresponding to Equations 16, 17, 18, and 19); and (3) water multipliers (corresponding to Equations 21 and 22).

Water coefficients.--A comparison of direct water intake coefficients for California and Arizona sectors (F^c and F^a) reveals that nine of the ten Arizona agricultural production sectors are more water intensive (i.e., use more water per unit of output) than their corresponding California sectors. However, of the five agricultural processing sectors in Arizona, only two are more water intensive than their corresponding California counterparts. Out of the eleven manufacturing, mining, and service sectors in Arizona, nine are less water intensive relative to their corresponding California counterparts. These findings imply that, in general, the Arizona manufacturing, mining, and service sectors are more "efficient" water users than their corresponding California sectors whereas the reverse is evident for agricultural sectors.[1/] Factors that may account for regional differences in water use efficiency include:

1. Prices for the same products in comparable sectors in the two states may differ markedly and, since output is expressed in dollar values, the water-to-output (in dollars) ratios are directly affected.

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1/ It should be emphasized that we are concerned here with relative rather than absolute efficiency. Thus if a sector j produces more output per unit of water intake than another sector k, then sector j is considered here to be relatively more efficient in water use than sector k.

TABLE 12

Water Coefficients and Water Multipliers, California-Arizona, 1958

Sector number	Direct water coefficient a/	Direct plus indirect water coefficient b/			Water multiplier		Sector number	Direct water coefficient a/	Direct plus indirect water coefficient b/			Water multiplier	
					unweighted c/	weighted d/						unweighted c/	weighted d/
	F^c	V^{cc}	V^{ac}	V^c	$\bar{W}^c$	$\bar{\bar{W}}^c$		F^a	V^{aa}	V^{ca}	V^a	$\bar{W}^a$	$\bar{\bar{W}}^a$
C 1	.041801	3.763725	.065021	3.828746	91.595	8,883	A 1	.133143	3.213810	.021537	3.235347	24.300	36,736
C 2	.004782	1.386341	.046646	1.432987	299.661	29,033	A 2	.002464	6.819656	.776313	7.595969	3,082.780	5,437
C 3	.026803	4.211387	.070293	4.281680	159.746	27,984	A 3	.083311	6.064158	.126771	6.190929	74.311	2,735
C 4	7.645343	7.952044	.008097	7.960141	1.041	4,131	A 4	20.542469	21.209582	.019430	21.229012	1.033	26,381
C 5	3.257761	3.497320	.001837	3.499157	1.074	104,520	A 5	4.089731	4.427143	.003211	4.430354	1.083	66,724
C 6	1.273657	1.387280	.000602	1.387882	1.090	52,002	A 6	2.089679	2.133146	.001008	2.134154	1.021	15,682
C 7	2.021884	2.082282	.000311	2.082593	1.030	18,914	A 7	3.242353	3.316499	.001581	3.318080	1.023	528
C 8	1.601713	1.650736	.000262	1.650998	1.031	23,644	A 8	3.634711	3.849893	.002406	3.852299	1.060	3,745
C 9	14.886410	14.962764	.000398	14.963162	1.005	5,149	A 9	5.294717	15.341862	.001003	15.342865	1.003	6,982
C 10	1.466330	1.807822	.004498	1.812320	1.236	18,959	A 10	2.088252	3.419714	.007457	3.427171	1.641	2,031
C 11	.002432	1.806043	.058345	1.864388	766.608	39,041	A 11	.006230	6.276708	.200054	6.476762	1,039.609	6,634
C 12	.012297	1.531531	.027833	1.559364	126.808	173,676	A 12	.003837	1.943736	.225234	2.168970	565.277	10,074
C 13	.020219	1.948301	.036040	1.984341	98.142	135,201	A 13	.003186	3.020581	.081742	3.102323	973.736	12,313
C 14	.010218	.636589	.002784	.639373	62.573	101,548	A 14	.013939	.285073	.083732	.368805	26.458	142
C 15	.013980	.241658	.003668	.245326	17.549	37,714	A 15	.006442	.780940	.085734	.866674	134.535	3,992
C 16	.022189	.069446	.000466	.069912	3.150	4,401	A 16	.009832	.128215	.019188	.147403	14.992	347
C 17	.017255	.041149	.000049	.041198	2.387	5,472	A 17	.006410	.011887	.001037	.012924	2.016	2
C 18	.003266	.010545	.000032	.010577	3.239	3,235	A 18	.000950	.013210	.001660	.014870	15.653	100
C 19	.001735	.005035	.000012	.005047	2.908	1,087	A 19	.001390	.011909	.001446	.013355	9.609	94
C 20	.004936	.018818	.000047	.018865	3.822	573	A 20	.060821	.106481	.002184	.108665	1.787	1,049
C 21	.022725	.038518	.000102	.038620	1.699	12,573	A 21	.002822	.061571	.002299	.063870	22.634	672
C 22	.058085	.070329	.000043	.070372	1.212	821	A 22	.047898	.072143	.001961	.074104	1.547	1,691
C 23	.056169	.068609	.000012	.068621	1.222	7,955	A 23	.091391	.106687	.001052	.107739	1.179	1,166
C 24	.004308	.011476	.000033	.011509	2.671	3,434	A 24	.004154	.012492	.001345	.013837	3.332	239
C 25	.004308	.010102	.000029	.010131	2.351	8,344	A 25	.004154	.012610	.001196	.013806	3.324	693
C 26	.004308	.013878	.000097	.013975	3.245	12,079	A 26	.004154	.025804	.004966	.030770	7.408	1,945

a/ Million gallons per $1,000 output.

b/ Million gallons per $1,000 final demand.

c/ Ratio of direct plus indirect water requirements to direct water requirements.

d/ Dollars per 10 percent change in final demand.

2. The product mix within sectors may also differ markedly. A good example would be dryland barley versus irrigated barley within the grain sector. The water coefficient based on such a mixed product is related directly to the relative proportion of irrigated acreage.

3. There is also the possibility of differences in production efficiency in similar sectors located in different regions due to differences in factor prices, soil productivity, and climate among other things. These differences are reflected in yield levels; the higher the yield in a certain sector, other things equal, the lower will be the water intake coefficient and vice versa.

Direct plus indirect water coefficients.--Nine out of ten Arizona agricultural sectors have greater direct plus indirect water intake per $1,000 of final demand relative to their corresponding California sectors which is consistent with the results obtained by consideration of only direct water intake coefficients. However, four of the five agricultural processing sectors in Arizona have greater direct plus indirect water intake coefficients relative to their corresponding California sectors which is almost the reverse of the direct coefficient comparison, and this emphasizes the importance of considering both direct and indirect economic relations in analyzing water-use patterns.

In summary, based on the direct plus indirect water intake coefficients, of the 26 endogenous sectors defined in both the California and Arizona model, 23 of them in Arizona use more water per dollar of final demand than their corresponding California counterparts. Recall, also, that 20 out of 26 sectors in California show larger output multipliers than their Arizona counterparts (Tables 9 and 10).

Water multipliers.--First, we consider the unweighted water multipliers ($\bar{W}$). Six out of ten California agricultural sectors show greater unweighted water multipliers than their respective Arizona counterparts. Only two of five agricultural processing sectors (Canning, preserving, and freezing and Miscellaneous agricultural processing) in California show a greater unweighted multiplier than the corresponding Arizona sector. Two of the eleven manufacturing, mining, and service sectors show greater values of unweighted multipliers than their corresponding Arizona sectors. In total, only ten out of twenty-six endogenous sectors in California show larger values of the multipliers than their corresponding Arizona counterparts.

However, with the water multipliers weighted with a 10 percent change in final demand, the results are reversed showing the effect of the relative sizes of the two state economies.[1/] For example, of the ten agricultural sectors, seven in California show larger weighted water multipliers than their corresponding Arizona sectors compared to only six when unweighted multipliers are used as basis for comparison. All the five California agricultural processing sectors have greater values of the weighted multipliers than their corresponding Arizona sectors as compared to only two when unweighted multipliers are used as the basis for comparison. Nine of the eleven manufacturing, mining, and service sectors in California induce larger weighted multipliers than their corresponding Arizona counterparts as compared to only two when comparison is based on unweighted multipliers. In total, 21 out of the 26 endogenous sectors in California have greater values of the weighted multipliers than their corresponding Arizona sectors as compared with only 10 when the unweighted multipliers are used as the basis for comparison.

Value added per unit of water used.--Still another alternative measure and comparison of sectors on a regional basis is value added per unit of water used in each of the sectors. This measure has been used by some authors to estimate the extent in which certain industries could absorb price increases for supplemental supplies of water, assuming that these price increases could not be passed on to the ultimate buyers of the industries' output.

The value added estimates also give some indication of the direct income-generating effects of each of the sectors in an economy. To obtain these magnitudes, each sector's value added figure [P_j] is divided by the total water used [r_j]. The resulting coefficients may be ranked by sectors to reveal the "efficiency" of water use patterns. That is, if a sector j generates greater value added per unit of water used than another sector k, then sector j is considered more efficient than sector k with respect to the water use patterns. It should be emphasized that relative efficiency and not absolute efficiency, is considered here. Therefore, if there is a need for water reallocation and if the sole objective of a region or a group of regions was maximum income generation per unit of a limited resource like water, then these

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1/ See Equation (22) for procedures for deriving weighted multipliers ($\bar{\bar{W}}$).

value added ratios can be utilized with other measures to indicate the direction of intraregional and interregional sectoral reallocations.

Value added in dollars per million gallons of water intake are shown and ranked for California and Arizona sectors in Table 13. A sector by sector comparison of these magnitudes indicates the following:

1. Eight of the ten California agricultural sectors have greater value added per million gallons of water intake than their corresponding Arizona sectors.

2. Only two of the five agricultural processing sectors in California have greater value added than their corresponding Arizona counterparts.

3. Only 6 of the 11 California manufacturing, mining, and service sectors have larger value added figures than their corresponding Arizona sectors.

4. For the California economy as a whole, 16 out of the 26 endogenous sectors have larger value added figures per million gallons of water intake than their corresponding Arizona sectors.

These results support the general conclusion (noted in the comparison of the other measures) that California sectors are in general more "efficient" water users (require less water per dollar of output) than their Arizona counterparts. Although these results are based on relative sector-to-sector comparisons, the further measure of aggregate value added per million gallons of water intake for California economy as a whole as compared to the comparable measure for the Arizona economy reinforces the same general conclusion.

SUMMARY AND CONCLUSIONS

Considerably greater progress has been made in quantitatively measuring economic interactions on state and national levels than between contiguous states and regions using input-output or interindustry analysis.

For this study, an input-output model was formulated using comparable input-output tables for California and Arizona which were fused together through two gross import matrices. Estimates of transactions with and between states were obtained from a variety of published and unpublished sources. While the study region involves only California and Arizona, it was intended to be

TABLE 13

Value Added Per Unit of Water Intake, California and Arizona Sectors, 1958
(dollars per million gallons of water intake)

Sector number	Sector title	California		Arizona		California vs. Arizona
		1	2	3	4	5
		Value added	Rank[a/]	Value added	Rank[a/]	Relative ranking
1	Meat animals and products	2294.12	19	1787.44	18	C > A
2	Poultry and eggs	7933.29	16	74500.00	6	A > C
3	Farm dairy products	12198.24	13	5565.29	16	C > A
4	Food and feed grains	65.98	25	27.66	26	C > A
5	Cotton	210.35	24	179.30	24	C > A
6	Vegetables	544.23	21	387.09	20	C > A
7	Fruit (excluding citrus) and nuts	318.37	23	207.36	22	C > A
8	Citrus	493.53	22	201.52	23	C > A
9	Forage	49.40	26	55.08	25	A > C
10	Miscellaneous agriculture	550.50	20	364.46	21	C > A
11	Grain mill products	168376.87	2	51579.31	9	C > A
12	Meat and poultry processing	11320.90	14	944.44	19	C > A
13	Dairy products	6955.97	18	62095.23	7	A > C
14	Canning, preserving, freezing	14849.38	11	28896.55	10	A > C
15	Miscellaneous agricultural processing	27067.72	7	79889.23	5	A > C
16	Chemicals and fertilizers	17151.68	10	15582.24	12	C > A
17	Petroleum	17580.12	9	19529.41	11	A > C
18	Fabricated metals and machinery	123806.35	3	428744.68	1	A > C
19	Aircraft and parts	360306.36	1	339700.72	2	C > A
20	Primary metals	75394.73	4	5170.40	17	C > A
21	Other manufacturing	23889.49	8	159387.09	3	A > C
22	Mining	10655.92	15	9967.73	14	C > A
23	Utilities	7544.68	17	6622.19	15	C > A
24	Selected services	13718.33	12	14818.48	13	A > C
25	Trade and transportation	63714.77	6	58846.39	8	A > C
26	Unallocated	72159.02	5	84108.78	4	A > C

a/ Ranked in the order of decreasing magnitudes.

a pilot study to indicate the problems encountered in connecting state economies in an input-output framework where primary emphasis is given to agriculture. The nature of the research conducted in this study, together with the statistical information generated throughout the course of its implementation, is additive in the sense that other interested researchers can improve and extend it to accomplish a broader objective of analyzing joint water utilization among all the eleven Western states.

Brief Summary of Empirical Results

1. Agricultural sectors in both California and Arizona are more dependent on nonagricultural sectors than the other way around (i.e., agricultural sectors purchase more inputs from nonagricultural sectors per dollar of final demand in specific former sectors than the other way around).

2. Most Arizona sectors have adverse balance of trade with respect to their corresponding California sectors (i.e., they import more from California than they export to California).

3. Agricultural sectors, especially crop sectors, in both California and Arizona are the most water intensive and consequently least efficient water users relative to other sectors. Agricultural sectors in both California and Arizona have smaller ratios of value added per unit of water used than industry sectors. Consequently, the ability of agricultural sectors to absorb price increases in primary factors like water is less than in other sectors.

4. Arizona agricultural sectors (9 out of 10), agricultural processing sectors (four out of five), and manufacturing, mining, and service sectors, are more water intensive than their corresponding California counterparts. Thus in general Arizona sectors (23 out of 26 endogenous sectors) are more water intensive than their corresponding California sectors. These findings are based on direct plus indirect water intake coefficients and their corresponding weighted water intake multipliers. As a corollary (based on value added comparisons) Arizona sectors contribute less to the aggregate value added in dollars per million gallons of water intake than the equivalent aggregate contribution by the California sectors. Consequently, in general the ability of the Arizona sector to absorb price increases in primary inputs like water is less than for the California sectors.

Some Limitations and Problems

We now turn to the limitations and problems that must be recognized in the interpretations of the results and implications derived from this study.

1. Pacity of trade flow data

An interregional model such as the one employed in this study requires ideally much interregional commodity flow data which are presently unavailable. The severity of this problem is manifested by the estimation procedures adopted for the California and Arizona import matrices.

What is really needed to overcome the data problem? First of all, it is necessary to have commodity flow data not only by state of origin and destination, but also by sector of origin and destination. Second, there is a need for the transport cost data for each group of commodity between the areas of origins and destinations. Third, there is a problem in estimating how much of a certain commodity transported from one region to another is actually utilized in the latter region and how much merely passes through to another region. This problem is bound to persist for a long time but it may be reduced by an attempt to net out these trans-shipments from the estimates of multiregional commodity flows and thus reduce the consequent double-counting. This might be accomplished through surveys of each industry in each region or, at least, those industries engaged in major shipments.

2. Stability of coefficients

The analyses conducted in this study are based on 1958 data and are now about 10 years out of date. Although some studies have indicated that technical coefficients are relatively stable over a period of about five years, the trade coefficients are probably relatively unstable (the more so the smaller the regions in question). Thus, if there has been a significant change in the bilateral trade relationships between California and Arizona from 1958 to the present, the interdependence analysis based on 1958 data (and consequently the policy implications derived from them) would not be applicable to the existing situation.

Some authors have concluded that errors due to imperfect aggregation and changing input-output coefficients are counterbalanced by the ability of input-output technique in revealing interdependencies among economic units. However,

these tests have so far not been performed on regional-interregional models. Given that regional economic activities are much more dependent on imports (the more so the smaller the region) than the national unit, there exists a greater potential for input-output coefficients to change more abruptly as the region develops thus increasing the margin for errors in predictive results.

3. Other

Other methodological limitations include the use of noncapacity model, the assumption of proportional production functions in the estimation of water coefficients and the assumption of uniform horizontal growth for all sectors in the estimation of weighted water intake multipliers.

APPENDIX

APPENDIX A

General Estimation Procedures

General estimation procedures and data sources for construction of the California transaction table are discussed in this section. While similar procedures were followed for the Arizona model, specific details are available upon request to Dr. William E. Martin, Department of Agricultural Economics, University of Arizona.

Output for the Production Agricultural Sectors

Output flows for the ten agricultural production sectors were developed largely from the U.S. Department of Agriculture, California Department of Agriculture, private, and industry crop and livestock statistics. (See Tables A-1 through A-10.)

Inputs for Production Agricultural Sectors

Purchased inputs by agricultural sectors from nonagricultural sectors were derived from six main sources[1/] [46], [48], [51], [53], [60], and [81]. The procedure for estimating inputs for agricultural production sectors involved the following six steps:

1. Expenditure on individual input items were distributed to 17 agricultural sectors for the United States [53].
2. California's proportion of that expenditure was derived by scaling each sector's input down by California's percent of acres, numbers, physical output, or value of output relative to the corresponding total U.S. figure for each sector. The particular measure used varied depending on the expenditure in question.
3. Results derived from number 2 above by expenditure class were compared with the control totals on the farm cash expenditures. Unless the control totals were grossly inconsistent with the more detailed information from [46], the derived distribution was adjusted proportionately to meet these totals. In most cases, the two estimates matched closely.

1/ Numbers in brackets refer to sources listed in the Literature Cited given at the end of Appendix A.

TABLE A-1

Available Supply and Distribution of Meat Animals and Products (UC 1), 1958[a/]

	Cattle and calves	Hogs	Sheep and lambs	Wool and mohair	Total
	thousand dollars				
Domestic supply	420,097	19,426	29,593	8,970	478,086
Gross domestic output	420,097	19,426	29,593	6,796	475,912
Inventory depletion	--	--	--	2,174	2,174
Distribution	420,097	19,426	29,593	8,970	478,086
Final demand sectors					
UC 27, Scrap and by-products	212	--	--	--	212
UC 28, Net exports	-156,528	-68,401	-14,749	8,866	-230,812
UC 33, Inventory addition	20,300	1,373	170	--	21,843
UC 36, Farm households	1,902	1,140	278	--	3,320
Intermediate sectors					
UC 12, Meat and poultry processing	554,211	85,314	43,894	--	683,419
UC 21, Other manufacturing	--	--	--	104	104

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [7], [30], [31], [45], [54], [66], [67], [72].

TABLE A-2

Available Supply and Distribution of Poultry and Eggs (UC 2), 1958[a/]

	Farm and nonfarm eggs	Farm and nonfarm chickens	Broilers	Turkeys and turkey eggs	Other poultry and eggs	Hatcheries (chicks and poults)	Total
	thousand dollars						
Domestic supply	165,796	12,185	33,153	64,374	3,662	46,898	326,068
Gross domestic output	165,796	12,185	33,153	64,341	3,662	46,898	326,035
Inventory depletion	--	--	--	33	--	--	33
Distribution	165,796	12,185	33,153	64,374	3,662	46,898	326,068
Final demand sectors							
UC 28, Net exports	- 2,146	165	280	873	--	--	- 828[b/]
UC 31, Local government	--	--	--	--	--	--	--
UC 33, Inventory addition	--	1,276	--	--	--	--	1,276
UC 36, Farm households	10,482	1,458	332	102	366	--	12,740
UC 37, Other households	151,350	5,828	10,227	18,613	3,107	--	189,125
Intermediate sectors							
UC 2, Poultry, eggs and hatching	4,764	--	--	6,327	--	46,898	57,989
UC 12, Meat and poultry processing	105	3,354	21,979	37,459	189	--	63,086
UC 13, Dairy products	33	--	--	--	--	--	33
UC 14, Canning, preserving, freezing	6	--	--	--	--	--	6
UC 15, Miscellaneous agricultural processing	1,202	104	335	1,000	--	--	2,641

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

b/ Export is military consumption.

Source: [13], [30], [31], [40], [64], [65], [76].

TABLE A-3

Available Supply and Distribution of Farm Dairy Products (UC 3), 1958[a/]

	Milk	Cream	Meat	Total
	thousand dollars			
Domestic supply	338,938	502	56,149	395,589
Gross domestic output	338,938	502	56,149	395,589
Inventory depletion	--	--	--	--
Distribution	338,938	502	56,149	395,589
Final demand sectors				
UC 27, Scrap and by-products	--	--	51,465	51,465
UC 33, Inventory addition	--	--	2,928	2,928
UC 36, Farm households	9,208	--	1,756	10,964
Intermediate sectors				
UC 3, Farm dairy products	10,401	--	--	10,401
UC 13, Dairy products	319,329	502	--	319,831

a/ Net imports do not occur. Therefore distribution is of domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [7], [41], [43], [47], [54].

TABLE A-4

Available Supply and Distribution of Food and Feed Grains (UC 4), 1958[a/]

	Corn	Barley	Oats	Sorghum	Silage and forage (corn and sorghum)	Wheat	Rye	Rice	Total
	thousand dollars								
Domestic supply	20,030	87,204	4,334	17,784	8,715	15,578	157	43,739	197,541
Gross domestic output	17,495	70,752	4,334	17,784	8,715	15,578	157	42,215	177,030
Inventory depletion	2,535	16,452	--	--	--	--	--	1,524	20,511
Distribution	20,030	87,204	4,334	17,784	8,715	15,578	157	43,739	197,541
Final demand sectors									
UC 28, Net exports	- 2,789	16,674	-1,186	-59,264	--	-24,840	- 79	--	- 71,484
UC 33, Inventory addition	--	--	91	23,954	--	1,656	--	--	25,701
Intermediate sectors									
UC 1, Meat animals	203	22,291	--	12,856	4,881	--	--	--	40,231
UC 2, Poultry and eggs	--	10,878	--	26,568	--	--	--	--	37,446
UC 3, Farm dairy products	--	17,833	--	4,457	3,834	368	--	--	26,492
UC 4, Food and feed grains	101	3,790	1,004	43	--	123	39	1,905	7,005
UC 10, Miscellaneous agriculture	--	223	456	--	--	--	--	--	679
UC 11, Grain mill products	18,712	12,483	3,969	9,170	--	38,271	--	41,834	124,439
UC 15, Miscellaneous agricultural processing	3,803	3,032	--	--	--	--	197	--	7,032

a/ Net imports are shown as negative net exports. Total inputs are distributed rather then domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [9], [25], [28], [30], [41], [70].

TABLE A-5

Available Supply and Distribution of Cotton and Cottonseed (UC 5), 1958[a/]

	Cotton	Cottonseed	Total
	thousand dollars		
Domestic supply	284,912	26,908	311,820
Gross domestic output	273,161	26,908	300,069
Inventory depletion	11,751	--	11,751
Distribution	284,912	26,908	311,820
Final demand sectors			
UC 27, Scrap and by-products	--	26,211	26,211
UC 28, Net exports	284,242	--	284,242
Intermediate sectors			
UC 5, Cotton	--	697	697
UC 21, Other manufacturing	670	--	670

a/ Net imports do not occur. Therefore distribution is of domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [30], [41], [87].

TABLE A-6

Available Supply and Distribution of Vegetables (UC 6), 1958[a/]

	Miscellaneous vegetables	Melons	Potatoes (including) sweet)	Dry beans and peas	Total
	thousand dollars				
Domestic supply	416,393	35,570	61,771	34,438	548,172
Gross domestic output	416,371	35,570	61,771	34,438	548,150
Inventory depletion	22	--	--	--	22
Distribution	416,393	35,570	61,771	34,438	548,172
Final demand sectors					
UC 27, Scrap and by-products	--	--	2,475	--	2,475
UC 28, Net exports	90,443	18,322	17,671	--	126,436
UC 32, Federal Government	1,325	70	1,361	--	2,756
UC 33, Inventory addition	--	--	91	--	91
UC 36, Farm households	12,127	1,036	63	--	13,226
UC 37, Other households	182,222	16,142	31,358	--	229,722
Intermediate sectors					
UC 6, Vegetables	--	--	577	1,206	1,783
UC 14, Vegetable and fruit processing	130,276	--	8,175	33,232	171,683

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [9], [11], [12], [30], [55], [56], [57], [58], [65], [73], [77], [78], [81].

TABLE A-7

Available Supply and Distribution of Fruits and Nuts (UC 7), 1958[a/]

	Apples	Apricots	Cherries (sweet)	Nectarines	Peaches	Pears	Persimmons	Plums	Prunes	Pomegranates	Total Deciduous	Avocados	Dates	Figs	Olives	Total semi-tropical	Grapes	Tree nuts	Bushberries	Total fruit and nuts
	thousand dollars																			
Domestic supply	9,895	14,130	5,670	4,619	47,240	29,712	205	9,943	37,440	197	159,051	9,028	2,136	5,868	6,666	23,698	173,369	46,661	3,528	406,307
Gross domestic output	9,508	14,130	5,670	4,619	47,240	29,393	205	9,943	37,440	197	158,345	9,028	2,136	5,868	6,666	23,698	173,369	46,661	3,528	405,601
Inventory depletion	387	--	--	--	--	319	--	--	--	--	706	--	--	--	--	--	--	--	--	706
Distribution	9,895	14,130	5,670	4,619	47,240	29,712	205	9,943	37,440	197	159,051	9,028	2,136	5,868	6,666	23,698	173,369	46,661	3,528	406,307
Final demand sectors																				
UC 28, Net exports	- 6,347	246	1,765	2,860	4,021	5,130	70	7,966	--	137	15,848	4,777	--	116	--	4,893	34,914	--	792	56,447
UC 36, Farm households	88	239	129	22	201	84	3	44	78	1	889	58	2	14	42	116	120	222	6	1,353
UC 37, Other households	11,090	615	1,284	1,637	3,746	2,856	132	1,843	--	59	23,262	4,193	--	300	113	4,606	5,551	--	305	33,724
Intermediate sectors																				
UC 14, Canning, preserving, freezing	5,064	13,030	2,492	100	39,272	21,642	--	90	37,362	--	119,052	--	2,134	5,438	6,511	14,083	132,784	--	2,425	268,344
UC 15, Miscellaneous food processing	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	46,259	--	46,259
UC 16, Chemicals and fertilizers	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	180	--	180

a/ Net imports are shown as negative exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [5], [8], [10], [12], [55], [56], [57], [58].

TABLE A-8

Available Supply and Distribution of Citrus (UC 8), 1958[a/]

	Oranges, tangerines, etc.	Grapefruit	Lemons	Limes	Citrus total
	thousand dollars				
Domestic supply	116,044	6,431	36,209	141	158,825
Gross domestic output	116,044	6,431	36,209	141	158,825
Inventory depletion	--	--	--	--	--
Distribution	116,044	6,431	36,209	141	158,825
Final demand sectors					
UC 28, Net exports	76,825	509	27,194	- 59	104,469
UC 36, Farm households	1,052	67	44	--	1,163
UC 37, Other households	29,298	5,448	2,631	200	37,577
Intermediate sectors					
UC 14, Canning, preserving, freezing	8,869	407	6,340	--	15,616

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [3], [10], [12], [56], [58].

TABLE A-9

Available Supply and Distribution of Forage (UC 9), 1958[a/]

	Hay	Pasture	Total
	thousand dollars		
Domestic supply	164,752	41,816	206,568
Gross domestic output	164,752	41,816	206,568
Inventory depletion	--	--	--
Distribution	164,752	41,816	206,568
Final demand sectors			
UC 28, Net exports	- 3,596	--	- 3,596
UC 33, Inventory addition	3,441	--	3,441
Intermediate sectors			
UC 1, Meat animals	73,706	26,744	100,450
UC 3, Farm dairy products	80,687	14,414	95,101
UC 10, Miscellaneous agriculture	5,356	658	6,014
UC 11, Grain mill products	5,158	--	5,158

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [9], [16], [17], [26], [32], [37], [41], [59], [69], [79], [81], [82], [89], [92].

TABLE A-10

Available Supply and Distribution of Miscellaneous Agriculture (UC 10), 1958[a/]

	Legumes, grass seed	Vegetable seed, greenhouse, nursery	Forest products	Sugar beets	Oil crops	Miscel-laneous crops	Horses and mules	Agricul-tural services	Fishing	Honey and bees-wax	Total miscellaneous agriculture
	thousand dollars										
Domestic supply	26,126	92,107	4,489	43,307	12,806	6,619	8,083	89,381	56,742	6,157	345,817
Gross domestic output	26,126	92,107	4,489	41,702	10,905	6,619	8,083	89,381	56,742	6,157	342,311
Inventory depletion	--	--	--	1,605	1,901	--	--	--	--	--	3,506
Distribution	26,126	92,107	4,489	43,307	12,806	6,619	8,083	89,381	56,742	6,157	345,817
Final demand sectors											
UC 28, Net exports	20,984	21,310	--	--	2,090	3,278	--	--	--	2,443	50,105
UC 33, Inventory addition	250	--	--	--	--	470	--	--	--	801	1,521
UC 37, Other households	--	49,144	785	--	--	--	4,800	--	--	1,764	56,493
Intermediate sectors											
UC 1, Meat animals	--	--	--	--	--	--	2,000	--	--	--	2,000
UC 2, Poultry	--	--	--	--	--	--	--	--	--	--	--
UC 3, Farm dairy products	--	--	--	--	--	--	800	2,110	--	--	2,910
UC 4, Food and feed grains	193	--	--	--	--	--	33	7,241	--	--	7,467
UC 5, Cotton	--	--	--	--	--	--	--	37,754	--	--	37,754
UC 6, Vegetables	--	13,361	--	--	--	--	--	17,919	--	--	31,280
UC 7, Fruit and nuts	--	3,619	--	--	--	--	--	8,078	--	--	11,697
UC 8, Citrus	--	1,752	--	--	--	--	--	2,136	--	--	3,888
UC 9, Forage	4,317	--	--	--	--	--	400	3,504	--	--	8,221
UC 10, Miscellaneous agriculture	382	1,139	--	--	195	370	--	10,639	--	--	12,725
UC 12, Meat and poultry processing	--	--	--	--	--	--	50	--	--	--	50
UC 14, Canning, preserving, freezing	--	--	--	--	--	26	--	--	56,742	--	56,768
UC 15, Miscellaneous agricultural processing	--	1,782	--	43,307	--	2,447	--	--	--	716	48,252
UC 16, Chemicals and fertilizer	--	--	--	--	10,521	--	--	--	--	433	10,954
UC 21, Other manufacturing	--	--	3,704	--	--	28	--	--	--	--	3,732

a/ Net imports do not occur. Therefore distribution is of domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [4], [7], [9], [30], [31], [33], [41], [42], [47], [50], [53], [65], [71], [74], [81], [88], [90].

4. Each input was converted to producers' value--using margins from [48] and unpublished sources.
5. Each sector's inputs were adjusted for differences in definition between the California and U.S. Department of Agriculture models.
6. The 17 U.S. Department of Agriculture sectors were then aggregated to the 10 California sectors.

Industry to Industry Flows

Tables A-11, A-12, and A-13 present supply and distribution of the remaining 16 endogenous sectors. The estimation of transactions from sectors 11 through 26 relied heavily upon the 1958 Office of Business Economics (OBE), U.S. Department of Commerce, Input-Output Table for the United States. Additional information was available for disaggregating the Food and Kindred Product Sector into seven subsectors. The input-output flows for the nonagricultural sectors were derived, in most cases, using technical coefficients from the modified 1958 OBE U.S. table (90 sectors) weighted by 1958 California sector outputs. Independent estimates of the value of California output (GDO) in 1958 (as a 90 order diagonal matrix) were premultiplied by the technical coefficients matrix (90 x 90) to obtain estimates of California transaction for each of the 90 sectors. The resulting 90 order table was aggregated to correspond to sectors in the California model. This procedure assumes uniform industry technical coefficients throughout the United States. The validity or resultant bias from such an assumption is still a question subject to continued debate pending more research and better methods of collecting regional data.

Gross Import Matrices for Arizona and California Economies

Estimation of gross import matrices for Arizona and California constituted a difficult and challenging problem. The approach followed was to generate and utilize any and all available data, in an attempt to trace the "actual" gross trade flows between California and Arizona. This included a mail questionnaire to marketing and trade organizations, interviews with commodity and other knowledgeable persons, as well as the usual search of published and unpublished data from state, federal, and private agencies. Since commodity flow data, where available, accounted for only portions of sectors, it was often necessary to construct ratios to expand or "blow-up" the sample to represent the complete sectoral transfer.

TABLE A-11

Available Supply and Distribution of the Agricultural Processing Sectors, 1958[a/]

	UC 11	UC 12	UC 13	UC 14	UC 15
	thousand dollars				
Domestic supply	440,725	1,231,625	769,477	1,623,105	1,869,688
Gross domestic output	440,725	1,231,625	769,477	1,623,105	1,869,688
Inventory depletion	--	--	--	--	--
Distribution	--	--	--	--	--
Final demand sectors					
UC 27, Scrap and by-products	2,583	15,488	--	--	8,329
UC 28, Net exports	-328,938	- 146,261	- 11,692	1,094,031	- 520,239
UC 30, New construction	--	2,037	--	--	--
UC 31, Local government	3,387	9,436	5,896	12,436	13,568
UC 33, Inventory addition	1,760	4,904	3,064	6,462	7,051
UC 37, Other households	356,263	1,213,916	682,724	475,325	1,935,344
Intermediate sectors					
UC 1, Meat animals and products	62,295	--	--	--	--
UC 2, Poultry and eggs	154,570	--	--	--	--
UC 3, Farm dairy products	56,919	--	--	--	--
UC 10, Miscellaneous agriculture	670	--	--	--	--
UC 11, Grain mill products	8,430	879	1,460	--	29,476
UC 12, Meat and poultry processing	--	51,860	3,282	--	--
UC 13, Dairy products	532	--	62,758	--	62,474
UC 14, Canning, preserving, freezing	10,992	11,683	10,090	25,403	96,058
UC 15, Miscellaneous agricultural processing	100,651	19,822	8,082	6,811	170,000
UC 16, Chemicals and fertilizers	4,029	3,445	1,003	516	51,634
UC 17, Petroleum	--	--	--	--	1,112
UC 18, Fabricated metals and machinery	--	--	--	--	49
UC 20, Primary metals	--	--	--	--	243
UC 21, Other manufacturing	21	2,106	128	139	2,079
UC 22, Mining	--	--	--	--	2
UC 24, Selected services	--	177	108	77	181
UC 25, Trade and transportation	341	2,584	1,590	1,164	1,534
UC 26, Unallocated services	220	39,549	984	741	10,793

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [6], [28], [30], [31], [45], [52], [62], [75], [83], [85].

TABLE A-12

Available Supply and Distribution of Manufacturing and Mining Sectors, 1958

	UC 16[a]	UC 17	UC 18[a]	UC 19	UC 20[a]	UC 21[a]	UC 22
	thousand dollars						
Domestic supply	1,437,285	3,183,127	5,076,264	3,575,553	1,227,157	5,038,674	397,863
Gross domestic output	1,437,285	3,156,417	5,003,122	3,569,019	1,222,035	5,037,412	395,022
Inventory depletion	--	26,712	73,142	6,534	5,122	1,262	2,841
Distribution of output	1,437,285	3,183,127	5,076,264	3,575,553	1,227,157	5,038,674	397,863
Final demand sectors							
UC 27, Scrap and by-products	23,807	3,140	71,027	39,386	34,552	35,649	--
UC 28, Net exports	- 567,200	393,542	-2,170,414	2,074,241	- 829,665	-2,804,405	42,593
UC 29, Maintenance construction	128,142	45,584	176,737	--	74,874	156,795	17,690
UC 30, New construction	70,583	111,396	1,066,306	--	387,678	1,022,368	7,840
UC 31, Local government	74,103	58,638	186,577	--	--	136,496	20,838
UC 32, Federal Government	--	--	--	--	--	--	--
UC 33, Inventory addition	102	--	--	--	--	--	--
UC 35, Capital formation	--	--	1,363,083	42,619	--	143,993	--
UC 37, Households	558,662	728,390	1,641,486	4,539	2,428	2,801,067	27,175
Intermediate sectors							
UC 1, Meat animals and products	6,517	1,162	5,004	--	78	3,408	36
UC 2, Poultry and eggs	4,546	1,742	1,336	--	13	1,609	34
UC 3, Farm dairy products	2,663	312	4,371	--	23	1,891	9
UC 4, Food and feed grains	13,146	11,984	5,978	--	13	3,372	1,881
UC 5, Cotton	20,392	5,414	3,829	--	18	1,944	1,804
UC 6, Vegetables	36,778	12,430	7,792	--	42	50,113	5,253
UC 7, Fruit and nuts	32,882	19,641	6,602	--	34	16,581	1,819
UC 8, Citrus	7,658	3,650	1,686	--	--	12,876	390
UC 9, Forage	8,824	15,196	7,407	--	15	4,372	2,390
UC 10, Miscellaneous agriculture	8,648	18,081	6,960	--	88	22,551	2,253
UC 11, Grain mill products	14,938	1,031	5,059	--	--	23,595	956
UC 12, Meat and poultry processing	4,536	2,409	8,658	--	39	7,017	539
UC 13, Dairy products	20,812	3,697	6,696	--	32	39,815	666
UC 14, Canning, preserving, freezing	34,979	9,020	247,297	--	2,625	126,276	1,388
UC 15, Miscellaneous agricultural processing	46,313	--	49,269	--	1,875	48,914	1,266
UC 16, Chemicals and fertilizers	392,706	--	37,991	67	17,871	62,629	11,449
UC 17, Petroleum	85,098	1,410,461	82,856	--	1,599	23,498	37,725
UC 18, Fabricated metals and machinery	53,953	16,770	1,206,420	24,464	901,650	232,364	3,138
UC 19, Aircraft and parts	6,957	4,778	273,703	719,662	133,849	73,723	394
UC 20, Primary metals	15,674	7,281	68,432	81	328,017	26,581	106,728
UC 21, Other manufacturing	224,275	24,245	184,988	9,879	118,315	1,519,063	50,355
UC 22, Mining	6,425	6,866	21,956	--	11,694	20,971	32,546
UC 23, Utilities	645	15,351	21,400	--	2,705	66,704	122
UC 24, Selected services	23,782	21,197	205,840	501,860	971	206,919	748
UC 25, Trade and transportation	7,701	180,746	88,128	22,140	7,586	169,253	2,547
UC 26, Unallocated services	68,238	48,975	181,804	136,615	28,138	780,672	15,291

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [2], [9], [10], [22], [30], [60], [63], [81], [82], [93].

TABLE A-13

Available Output and Distribution of the Utilities, Service, and Transportation Sectors, 1958

	UC 23[a]	UC 24	UC 25	UC 26
	thousand dollars			
Domestic supply	2,222,818	3,811,907	11,045,931	14,278,694
Gross domestic output	2,222,818	3,811,907	11,045,931	14,278,694
Inventory change	--	--	--	--
Distribution of output	2,222,818	3,811,907	11,045,931	14,278,694
Final demand sector				
UC 27, Scrap and by-products	--	--	22,041	--
UC 28, Net exports	- 503,238	481,913	49,177	- 1,331,573
UC 29, Maintenance construction	4,819	33,223	202,484	26,447
UC 30, New construction	27,110	7,253	789,771	440,917
UC 31, State and local government	115,283	25,116	99,734	241,531
UC 32, Federal Government	50,042	545,257	201,688	324,731
UC 35, Gross private capital formation	29,865	1,132	295,460	96,968
UC 37, Households	1,173,419	1,895,722	6,573,771	8,336,267
Intermediate sectors				
UC 1, Meat animals and products	8,583	4,825	18,597	47,320
UC 2, Poultry and eggs	2,796	789	160	6,220
UC 3, Farm dairy products	5,026	1,415	19,963	24,561
UC 4, Food and feed grains	3,279	515	319	54,249
UC 5, Cotton	5,736	483	608	87,987
UC 6, Vegetables	8,181	1,358	827	67,402
UC 7, Fruit and nuts	7,107	1,747	1,460	29,206
UC 8, Citrus	1,555	360	517	11,153
UC 9, Forage	3,890	605	456	57,756
UC 10, Miscellaneous agriculture	21,267	2,718	2,371	76,764
UC 11, Grain mill products	1,939	1,323	20,796	11,767
UC 12, Meat and poultry processing	7,126	37,710	63,772	71,101
UC 13, Dairy products	5,738	6,951	65,552	34,886
UC 14, Canning, preserving, freezing	12,459	8,277	136,503	75,735
UC 15, Miscellaneous agricultural processing	11,701	8,613	382,674	117,811
UC 16, Chemicals and fertilizers	21,396	11,813	140,134	110,207
UC 17, Petroleum	42,711	9,170	147,336	315,952
UC 18, Fabricated metals and machinery	43,019	13,678	248,824	231,893
UC 19, Aircraft and parts	19,666	3,898	55,958	42,173
UC 20, Primary metals	31,004	4,762	91,901	33,505
UC 21, Other manufacturing	70,053	26,489	347,737	176,099
UC 22, Mining	10,446	708	14,932	21,037
UC 23, Utilities	393,156	2,897	28,422	195,550
UC 24, Selected services	48,594	263,686	135,355	656,931
UC 25, Trade and transportation	290,065	206,262	385,987	1,619,567
UC 26, Unallocated services	249,025	201,239	500,644	1,966,574

a/ Net imports are shown as negative net exports. Total inputs are distributed rather than domestically produced inputs only. (See discussion of Sector UC 28.)

Source: [15], [16], [21], [47], [63], [81], [93], [94], [95].

TABLE A-14

Water Requirements by California and Arizona Sectors, 1958

Sector number	Sector title	Water intake	
		California	Arizona
		million gallons	
1	Meat animals and products	12,634	19,016
2	Poultry and eggs	1,559	20
3	Farm dairy products	10,603	2,144
4	Food and feed grains	1,353,455	578,517
5	Cotton	977,553	616,711
6	Vegetables	698,155	154,304
7	Fruit (excluding citrus) and nuts	820,078	5,512
8	Citrus	254,392	35,980
9	Forage	3,075,056	523,997
10	Miscellaneous agriculture	501,941	56,151
11	Grain mill products	1,072	145
12	Meat and poultry processing	15,145	198
13	Dairy products	15,558	147
14	Canning, preserving, freezing	16,585	58
15	Miscellaneous agricultural processing	26,138	325
16	Chemicals and fertilizers	31,892	383
17	Petroleum	54,463	17
18	Fabricated metals and machinery	16,339	94
19	Aircraft and parts	6,192	137
20	Primary metals	6,032	10,000
21	Other manufacturing	114,476	496
22	Mining	22,945	15,065
23	Utilities	124,853	17,136
24-26	Combined commercial	124,357	7,630
	TOTAL	8,281,773	2,044,183

While the research budget for this project prohibited extensive survey to obtain primary data, nonetheless it became apparent that interstate trade data of the detail required for I-O studies is not generally collected and summarized by most firms. This paucity of interregional commodity flow data is undoubtedly the greatest current obstacle to constructing a meaningful multiregional model of the western United States and results presented in the text must be qualified to the extent necessary to reflect data inadequacies.

California sectors 1-23.--The following are the major sources used for estimating the gross exports to Arizona by California sectors 1-23:

1. The Interstate Commerce Commission, Carload waybill statistics [23].
2. USDA Agricultural Marketing Service, Fruit and Vegetable Division, Washington, D.C., [55].
3. A mail questionnaire sent to 389 marketing and trade organizations throughout the state of California. The questionnaire requested the organizations to provide volume and/or value of the commodities shipped to Arizona and other states in the union.
4. Different commodity experts of the California Department of Agriculture were interviewed personally.

These and other sources were used either singly or in combination to arrive at a rough estimate of each sector's gross export to Arizona.

In most cases, especially where the estimates were based on ICC data, a problem of valuation did arise since most of the ICC commodity classifications do not correspond with the Standard Industrial Classification (SIC) on which the sectoring pattern of the California and Arizona models are based.

Thus the second step was to convert tonages of different commodity groups into producers value. To accomplish this the following sources were used:

1. An ICC study, which correlated the freight revenue and wholesale value at destination of commodities transported by Class I line-haul railroads, was used whenever appropriate to impute dollar values to different commodity groups [24]. To approximate the producer's value the wholesale value at destination was adjusted for transportation charges based on the freight revenues published by the ICC.
2. U.S. Department of Labor, Wholesale Prices and Price Indexes [91].
3. USDA, Crop Values-Season average prices received by farmers [68].

4. The Claims Department of the Southern Pacific Railroad maintains records of number of claims and revenue paid for such claims in case of spoilage of freight haul. This source was used also to estimate value for certain categories of commodities.
5. When the above sources and other published sources were not adequate to establish the value of a certain commodity group, the local wholesalers of equivalent commodities were contacted for information.

The last step was to examine the figures obtained above for completeness of sectoral coverages. In many cases, available data represented only a few subcomponents of sectoral outputs. Then, the preliminary figure was "blown-up" in proportion to subsector contribution of the appropriate sectoral outputs. For example, the preliminary gross export figure for California sector 2 (Poultry and eggs) was $9,843,000. This figure was based on data for "farm and nonfarm eggs" subcomponent of sector 2. Since "farm and nonfarm eggs" constituted only 0.508470 of the 1958 sector 2 output, the figure was adjusted upward by a factor of 1.966684 (i.e., $\frac{1}{0.508470}$). The resulting final figure was $19,358,071 (or $9,843,000 x 1.966684).

The implicit assumption in the above procedure is that a subcomponent of any sector (where complete data was not available) contributed to that sector's gross trade in the same proportion as it contributed to the sector's gross output.

Arizona sectors 1-23.--In estimating the Arizona gross import for sectors 1-23, the same procedures were used as described above. The major data sources were [23], [24], [55], [91].

California and Arizona sectors 24 and 26.--Complete lack of data on both California and Arizona sector 24 (Selected Services) prevented estimation of actual trade flows for this sector. Consequently, a net relationship was employed. However, since both California and Arizona sectors 24 are net exporters it was further assumed that no net flows occurred between the two states.

The same reasoning was employed for California and Arizona sector 26 (Unallocated Services). Both were net importers, and it was assumed that no cross-hauling occurred between the two states.

Sector 25--trade and transportation.--Due to complete lack of data, it was here assumed that trade and transportation sector's contribution to exports was in the same proportion as its contribution to total domestic output of all sectors. Thus, the following relationships were used to arrive at an estimate for the gross export of sector 25 in each one of the two states.

$$\frac{t_{25}^{ca}}{X_{25}^{c}} = \frac{\text{Total gross exports of California sectors 1-30 excluding sectors 25 and 28}}{\text{Total GDO of California sectors 1-30 excluding sectors 25 and 28}}$$

where

t_{25}^{ca} = gross export of California sector 25 to Arizona

X_{25}^{c} = gross output of California sector 25.

Also

$$\frac{t_{25}^{ac}}{X_{25}^{a}} = \frac{\text{Total gross exports of Arizona sectors 1-30 excluding sectors 25 and 28}}{\text{Total GDO of California sectors 1-30 excluding sectors 25 and 28}}$$

where

t_{25}^{ac} = gross export of Arizona sector 25.

X_{25}^{a} = gross output of Arizona sector 25.

The implicit assumption is that the total transportation cost is closely related to the volume of commodities hauled between the two states.

Sectors 27 and 31.--Gross exports for these sectors--scrap and by-products, households, and governments respectively--were not estimated. Because of the lack of data no sound basis existed for making such estimates.

Sectors 29 and 30.--(Maintenance Construction and New Construction) Lack of data dictated the adoption of the following procedure:

$$\frac{t_{29}^{c}}{X_{29}^{c}} = \frac{\text{Total gross exports of California sector 1-26 excluding sector 25}}{\text{GDO for sectors 1-26 excluding sector 25}},$$

$$\frac{t^a_{29}}{X^a_{29}} = \frac{\text{Total gross exports of Arizona sector 1-26 excluding sector 25}}{\text{GDO for Arizona sectors 1-26 excluding sector 25}},$$

$$\frac{t^c_{30}}{X^c_{30}} = \frac{\text{Total gross exports of California sectors 1-29 excluding sectors 25, 27, and 28}}{\text{GDO for California sectors 1-29 excluding sectors 25, 27, and 28}},$$

$$\frac{t^a_{30}}{X^a_{30}} = \frac{\text{Total gross exports of Arizona sectors 1-29 excluding 25, 27, and 28}}{\text{GDO for Arizona sectors 1-29 excluding sectors 25, 27, and 28}}.$$

Estimation of Water Requirements

The estimation of water requirements necessarily begins with definitions. Withdrawal uses of water are those which are actually transported from some source, either surface or underground, to the point of use. Within this study, no distinction was made between ground water and surface water. Three measures relating to the withdrawal uses of water are: water intake, gross water used, and water consumed. Water intake, the measure used in this analysis, is defined as the quantity of water which an industry withdraws from its source of supply. Any loss of water through evaporation or some other process after the industry has withdrawn the water is included as a part of water intake. Not included as water intake is that water which is lost before the industry withdraws the water. This distinction is important in the handling of surface water used in irrigation. For example, water intake for sector 4 (Food and feed grains) is that water actually pumped from wells for use in sector 4 and/or that water actually withdrawn from public irrigation canals. Not included as water intake is the amount of water lost in transportation to the farmer's first point of withdrawal.

Gross water used refers to the total amount of water used including recirculation. Consumptive use of water is the quantity discharged to the atmosphere or incorporated into the products of the process in which it was used.

The estimation of water requirements involves two processes: (1) the estimation of control totals for each major grouping of sectors (livestock, crops, industry, and commercial sectors) and (2) the distribution of water between the sectors. Although nation-wide interest in the problem of water

scarcity has been rapidly growing in recent years, the data availability for comprehensive study on water usage is still a major problem. Consequently, the California and Arizona studies relied on many varied sources of information in arriving at final estimates of sectoral water demands. These sources and techniques of estimation are outlined below:

Sectors 1-3--Livestock.--The preliminary estimates for livestock water withdrawals include only drinking water requirements. The equation used was:

$$\text{Required drinking water for a class of animals, 1958} = \left[\begin{array}{l}\text{Daily water}\\ \text{requirements}\\ \text{per animal}\end{array}\right] \cdot \left[\text{365 days}\right] \cdot \left[\begin{array}{l}\text{Average inventory}\\ \text{for each class in}\\ \text{1958}\end{array}\right].$$

Drinking water requirements were defined as average amount consumed and not as a minimum requirement for survival.

For California sector 1-3 sources [20], [30], [35], and [38] were used and sources [1], [19], [30], [34], [36], [44], and [49] for Arizona sectors 1-3.

For sectors 1-3 the estimates of required "water intake" are equal to the "water consumed" concepts. The reasoning is that all water intake is evaporated, drunk, or lost and is, therefore, consumed. Also, there is no apparent recirculation, so "water intake" and "gross water used" are identical quantities.

Sectors 4-10--Crops.--Total water requirements for the seven agricultural crop sectors were computed as follows:

$$\text{Total water requirements of crop i, 1958} = \left[\begin{array}{l}\text{Water requirement}\\ \text{per irrigated acre}\end{array}\right] \cdot \left[\begin{array}{l}\text{Acres of crop i}\\ \text{irrigated, 1958}\end{array}\right].$$

Total water requirements for individual crops were then aggregated according to sectors 4 through 10. Total acreage under cultivation for each crop was made to agree with the one used in computation of gross domestic output. Total acreage was separated into irrigated and nonirrigated using sources [61] and [82] for California and [61] and [80] for Arizona.

In all cases the estimated water intake requirements are for ground water pumped or surface water taken by the farmer at his first point of acceptance; that is, water purchased by the farmer. This necessarily includes water which

is lost through evaporation or seepage after the farmer receives it--not included are conveyance losses occurring prior to the farmer's acceptance.

Sectors 11-21--Manufacturing and Processing.--The estimates of California water intake by sectors 11-21 were obtained largely from sources [14] and [84]. Source [14] gives estimates according to 3-digit SIC sectors which allowed reaggregation in appropriate sectors. For Arizona sectors 11-21 [84] was the major source.

To determine the gross water and water consumed for each industry the following procedures were used. For California, it was assumed that gross water and water discharged is related to California water intake as the total U.S. gross water and water discharged is related to total U.S. water intake for each industry. California water consumed was then obtained by subtracting water discharged from water intake.

For Arizona initial estimates were made for each industry assuming that the ratio of water to shipments is the same for Arizona as the United States as a whole. This yielded a general equation of the form:

$$\frac{\text{United States water intake, Industry y}}{\text{United States shipments, Industry y}} = \frac{\text{Arizona water intake}}{\text{Arizona shipment of Y}} .$$

Data on shipments came from [85] and water requirements for the United States are reported in [84].

In certain cases, part of the total United States water requirements were not included in the California total because certain national industries were not present in California. For example, wet corn milling was not included in California sector 11 and sugar cane was excluded from sector 15 because of the absence of these industries in California.

Sector 23--Utilities.--The sector has three components for which water requirements must be obtained: electric light and power, telephone and telegraph, and gas. The most important of these quantitatively for water is electric light and power. The assumption was made that water intake was proportional to annual output of electrical power. Thus the following relation was used:

$$\frac{\text{Water required 1960}}{\text{Electricity produced, 1960}} = \frac{\text{Estimated water required 1958}}{\text{Electricity produced, 1958}} .$$

Data on water requirements for electric power generating companies were from [30] and data on electricity produced in 1958 and 1960 were from [88].

Sectors 24-26, 29, and 30.--There is no set of reliable or consistent data which give water requirements of the various trade, transportation, service, and construction industries. Commercial requirements for water are, however, quantitatively very small.

Water estimates for these commercial sectors were adopted from the Lofting and McGauley Economic Evaluation of Water, Part II, [29]. The estimates for the Arizona's combined commercial sectors were given in Tijoriwala, et al., [39, Part II, op. cit.].

Table A-14 gives the estimates of the water intake requirements for California and Arizona sectors in million gallons. Heavy agricultural water use is noted by the fact that out of 8,281,773 million gallons of total water intake by California sectors, 7,705,426 million gallons (approximately 93 percent) were used by agricultural production sectors, 74,498 million gallons (approximately 1 percent) were used by agricultural processing sectors, and the remaining 501,549 million gallons (approximately 6 percent) were used by manufacturing, mining, and service sectors.

APPENDIX B

THE NORTH-SOUTH CALIFORNIA MODEL (1958)

Mathematical Formulation

The North-South California model is developed by expanding the transaction matrix of the general California model into a northern (n) and southern (s) region. That is, each sector is described both by type of activity or product (i, j) and regional location (n, s). Thus, the two-region flow equations are:

$$X_i^n = \sum_j X_{ij}^{nn} + \sum_j X_{ij}^{ns} + Y_i^n + Y_i^s \qquad i, j = 1 \ldots 26 \tag{B-1}$$

$$X_i^s = \sum_j X_{ij}^{ss} + \sum_j X_{ij}^{sn} + Y_i^n + Y_i^s.$$

The left superscript indicates the region of production, while the right superscript indicates the region of destination.

Constant technical coefficients are expressed for all 52 (26 in each region) of the northern and southern sectors considered endogenous in the model. Definition of the a_{ij} is as follows:

(B-2a) $a_{ij}^{nn} = \dfrac{X_{ij}^{nn}}{X_j^n}$ are direct inputs from northern sector i to northern sector j per dollar of output of northern sector j.

(B-2b) $a_{ij}^{ss} = \dfrac{X_{ij}^{ss}}{X_j^s}$ are direct inputs from southern sector i to southern sector j per dollar of output of southern sector j.

(B-2c) $a_{ij}^{ns} = \dfrac{X_{ij}^{ns}}{X_j^s}$ are direct inputs from northern sector i to southern sector j per dollar of output of southern sector j.

(B-2d) $a_{ij}^{sn} = \dfrac{X_{ij}^{sn}}{X_j^n}$ are direct inputs from southern sector i to northern sector j per dollar of output of northern sector j.

Substituting Equation (B-2a) - (B-2d) into (1) and rearranging terms gives:

$$\text{(B-3)} \qquad \left[\begin{array}{c|c} I - A^{nn} & -A^{ns} \\ \hline -A^{sn} & I - A^{ss} \end{array}\right] \left[\begin{array}{c} X^n \\ \hline X^s \end{array}\right] = \left[\begin{array}{c} Y^n \\ \hline Y^s \end{array}\right].$$

The X and Y vectors are partitioned into two submatrices, each 26 x 1, while the A matrix is partitioned into four submatrices, each 26 x 26. The solution for X here has the same general form as the solution for X in the general model. This is,

$$\text{(B-4)} \qquad X = (I - A)^{-1}Y.$$

The matrix of interdependence or inverse coefficients, $(I - A)^{-1}$, is expressed as,

$$\text{(B-5)} \qquad \left[\begin{array}{c|c} A^{nn*} & A^{ns*} \\ \hline A^{sn*} & A^{ss*} \end{array}\right] = A^*.$$

Each submatrix is of dimensions 26 x 26. Interpretation of these interdependency coefficients (A*) is as follows:

1. A_{ij}^{nn*} show the direct and indirect requirements for products of northern sector i per dollar of final demand for products of northern sector j.
2. A_{ij}^{ss*} show the direct and indirect requirements for products of southern sector i per dollar of final demand for products of southern sector j.
3. A_{ij}^{ns*} show the direct and indirect requirements for products of northern sector i per dollar of final demand for products of southern sector j.
4. A_{ij}^{sn*} show the direct and indirect requirements for products of southern sector i per dollar of final demand for products of northern sector j.

Final demand for products of each region may occur either in the region of production, the other California region, from outside of the state, or from any combination of these sources.

Regional Classification

California is divided into a northern and southern region using the physical and "traditional" division of the state by the Tehachapi Mountains. In addition to the Tehachapis being the traditional dividing line between Northern and Southern California, they possess particular significance for economic analysis because of the increased transportation cost their presence entails.

This natural division of the State is approximated by the northern boundries of Santa Barbara, Ventura, Los Angeles, and San Bernardino counties (see Figure 1).

Division of Outputs and Inputs for Northern and Southern California

The general method of construction of the North-South transaction matrix involved "splitting" the purchased inputs for each sector from the California table into two components--Northern and Southern California--in proportion to the relative output for each region. The implicit assumption is that the gross technical coefficients matrix (value of input from all sources per unit of output) is identical in both regions. In a few instances, however, where the assumption of identical technical coefficients was obviously unrealistic, separate coefficients were derived for each area.

Percentages of California output produced in the North and in the South are presented in Table B-1. These same percentages were used to divide the input structure of corresponding sectors. In many sectors, a single input division was made. For instance, because poultry and egg output (Sector 2) is distributed 56.81 percent to the North and 43.19 percent to the South, each input flow to this sector was divided in this same proportion.

Where data are available, the California input structure was disaggregated into smaller subsectors before input division was made. Thus, components of the sector were weighted for differences in relative regional production. Measures used, in order of decreasing preference, were regional value output data,

FIGURE 1. Regional Division of California

TABLE B-1

Division of California Sector Outputs, by Regions, 1958

Sector number	Sector title	Percent of total California output production	
		North	South
1	Meat animals and products	60.79	39.21
2	Poultry and eggs	56.81	43.19
3	Farm dairy products	59.37	40.63
4	Food and feed grains	86.07	13.93
5	Cotton	90.37	9.63
6	Vegetables	64.69	35.31
7	Fruits and nuts (excluding citrus)	94.39	5.61
8	Citrus	23.57	76.43
9	Forage	79.22	20.78
	Hay	77.42	22.58
	Pasture	86.33	13.67
10	Miscellaneous agriculture	48.42	51.58
	Fishing	14.81	85.19
	Agricultural services	53.74	46.26
	Other miscellaneous agriculture	56.35	43.65
11	Grain mill products	58.14	41.86
12	Meat and poultry processing	48.96	51.04
13	Dairy products	56.30	43.70
14	Canning, preserving, and freezing	78.13	21.87
15	Miscellaneous agricultural processing	56.03	43.97
	Bakery products	44.96	55.04
	Sugar	95.95	4.05
	Confectionery, beverages, and miscellaneous	58.81	41.19
	Tobacco	14.57	85.43
16	Chemicals and fertilizers	41.16	58.84
17	Petroleum	43.87	56.13
	Crude petroleum	41.90	58.10
	Petroleum processing	48.92	51.08
18	Fabricated metals and machinery	35.34	64.66
	Fabricated metal products	31.60	68.40
	Machinery (except electrical)	34.78	65.22
	Electrical machinery	26.73	73.27
	Transportation equipment (except aircraft)	39.30	60.70
19	Aircraft	1.16	98.84
20	Primary metals	37.79	62.21
21	Other manufacturing	34.56	65.44
	Textile mill products	27.18	72.82
	Apparel and fabricated textiles	18.58	81.42
	Lumber and wood products	86.14	13.86
	Furniture and fixtures	24.29	75.71
	Paper and allied products	48.55	51.45
	Printing and publishing	45.16	54.84
	Rubber products	11.49	88.51
	Stone, clay, and glass products	35.67	64.33
	Instruments, watches, etc.	9.72	90.28
	Miscellaneous manufacturing	21.12	78.88
	Leather products	--	--
22	Mining	45.16	54.84
23	Utilities	49.18	50.82
	Gas and electricity	50.38	49.62
	Telephone and telegraph	47.27	52.73
24	Selected services	35.30	64.70
	Personal services and auto repairs	39.79	60.21
	Other services	31.49	68.51
25	Trade and transportation	42.71	57.29
26	Unallocated services	37.84	62.16
27	Scrap and by-products	--	--
28	Net exports and imports	--	--
29	Maintenance construction	45.14	54.86
30	New construction	45.14	54.86
31	State and local government	42.57	57.43
32	Federal government	42.57	57.43
33	Inventory addition	--	--
34	Inventory depletion	--	--
35	Gross private capital formation	39.62	60.38
36-37	All households	--	--

physical output data, value added data, wages paid data, and physical employment data. For some sectors, combinations of two or more measures were used.

Net Exports and Imports

The difference between estimated regional production and estimated regional consumption was designated as net imports or net exports for each sector (Table B-2). Imports were reallocated to purchasing sectors as in the California model; that is, the available supply of imports from each region was allocated among the purchasing sectors in proportion to the total use of that commodity by the purchasing sector relative to the total use of that commodity by all sectors.

Four alternative import-export relationships occurred in the construction of the Southern California model:

1. Both the North and the South were net exporters. No flows are shown between the two regions. All exports are distributed to sector (row 28b) (net exports to outside of California).

2. Both the North and the South were net importers. No flows are shown between the two regions. Each region's deficit is distributed to the purchasing sector from sector (row 28b) (net imports from outside of California).

3. The North was a net exporter and the South was a net importer. Exports are distributed from the northern producing sector to the southern purchasing sector until either the South's import requirements are filled or the North's export capacity is reached (row 28a). All northern exports not used by the South are exported to outside California. If the North could not supply all the imports needed by the South, the deficit was supplied from outside of California (row 28b).

4. The South was a net exporter and the North a net importer. Similar procedures as discussed in (3) above.

Empirical Results

Transaction Table

The transaction table for the combined North-South California economy (Table B-3) gives the interindustry flows of goods and services by sector and region of origin and destination.

TABLE B-2

California Regional Net Imports and Exports by Sector of Origin, 1958

Sector number	Sector title	Northern California		Southern California	
		Net exports	Net imports	Net exports	Net imports
		thousand dollars			
1	Meat animals	--	165,016	--	239,477
2	Poultry and eggs	31,227	--	--	32,055
3	Farm dairy products	--	144	--	16,637
4	Food and feed grains	3,798	--	--	75,282
5	Cotton	257,243	--	26,999	--
6	Vegetables	109,704	--	16,732	--
7	Fruits and nuts	132,166	--	--	75,719
8	Citrus	8,890	--	95,579	--
9	Forage	37,481	--	--	41,077
10	Miscellaneous agriculture	--	23,014	73,119	--
11	Grain mill products	--	135,304	--	193,634
12	Meat and poultry processing	4,601	--	--	150,862
13	Dairy products	85,302	--	--	96,994
14	Canning, etc.	1,029,812	--	64,219	--
15	Miscellaneous agricultural processing	--	44,344	--	475,895
16	Chemicals and fertilizers	--	291,991	--	275,210
17	Petroleum	160,454	--	233,089	--
18	Fabricated metals and machinery	--	1,184,078	--	986,335
19	Aricraft	--	236,540	3,310,781	--
20	Primary metals	--	276,450	--	553,215
21	Other manufacturing	--	1,412,041	--	1,392,361
22	Mining	36,182	--	6,411	--
23	Utilities	--	74,902	--	428,336
24	Selected services	--	41,152	523,065	--
25	Trade and transportation	--	38,692	87,868	--
26	Unallocated services	--	1,097,842	--	233,731
27	Scrap and by-products	--	40,377	40,377	--

TABLE B-3

Interindustry Flows of Goods and Services by Sector and Region of Origin and Destination, N. California and S. California, 1958/

Sector number	Sector title	N 1 Meat animals	N 2 Poultry and eggs	N 3 Farm dairy prod.	N 4 Grains	N 5 Cotton	N 6 Veg.	N 7 Fruit and nuts	N 8 Citrus	N 9 Forage	N 10 Misc. agri	N 11 Grain mill prod.	N 12 Meat & poultry proc.	N 13 Dairy prod.	N 14 Canning, preserving freezing	N 15 Misc. agri proc.	N 16 Chem and fert.	N 17 Petro-leum	N 18 Fab. metals & mach.	N 19 Air craft	Sector number
N 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	176277.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 1
N 2	Poultry and eggs	-0.	32944.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	30887.	19.	5.	1480.	-0.	-0.	-0.	-0.	N 2
N 3	Farm dairy products	-0.	-0.	6171.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	179950.	-0.	-0.	-0.	-0.	-0.	-0.	N 3
N 4	Food and feed grains	24456.	21273.	15728.	6029.	-0.	-0.	-0.	-0.	-0.	329.	72349.	-0.	-0.	-0.	3940.	-0.	-0.	-0.	-0.	N 4
N 5	Cotton	-0.	-0.	-0.	-0.	630.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 5
N 6	Vegetables	-0.	-0.	-0.	-0.	-0.	1153.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	134136.	-0.	-0.	-0.	-0.	-0.	N 6
N 7	Fruit (excluding citrus) & nuts	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	209657.	25919.	74.	-0.	-0.	-0.	N 7
N 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	12201.	-0.	-0.	-0.	-0.	-0.	N 8
N 9	Forage	61.64.	-0.	56461.	-0.	-0.	-0.	-0.	-0.	-0.	2912.	2999.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 9
N 10	Miscellaneous agriculture	1.68.	-0.	1517.	5643.	29959.	17768.	9695.	804.	5719.	5410.	-0.	21.	-0.	38945.	23740.	3959.	-0.	-0.	-0.	N 10
N 11	Grain mill products	24783.	57467.	22115.	-0.	-0.	-0.	-0.	-0.	-0.	212.	3207.	-0.	196.	5620.	39107.	1085.	-0.	-0.	-0.	N 11
N 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	511.	25391.	-0.	91278.	11106.	1418.	-0.	-0.	-0.	N 12
N 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	849.	1607.	35333.	7883.	4528.	413.	-0.	-0.	-0.	N 13
N 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	19847.	3816.	212.	-0.	-0.	-0.	N 14
N 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	16441.	-0.	33745.	72002.	91383.	20390.	468.	16.	-0.	N 15
N 16	Chemicals and fertilizers	463.	524.	186.	6128.	6220.	12593.	20227.	1190.	3519.	1814.	5931.	1517.	8002.	18665.	17722.	110390.	25496.	13022.	55.	N 16
N 17	Petroleum	232.	1742.	94.	6985.	3091.	6879.	12074.	578.	3992.	1588.	608.	1197.	2112.	7151.	-0.	-0.	627971.	6014.	56.	N 17
N 18	Fabricated metals and machinery	3.71.	2119.	2158.	10301.	3913.	9268.	15191.	770.	6392.	2362.	1743.	2513.	2234.	114515.	16361.	9268.	21544.	252690.	1882.	N 18
N 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	4.	-0.	1288.	1243.	N 19
N 20	Primary metals	24.	14.	11.	9.	9.	23.	34.	2.	4.	8.	-0.	12.	11.	1283.	657.	4602.	439.	199323.	971.	N 20
N 21	Other manufacturing	749.	909.	587.	919.	708.	6992.	9193.	552.	567.	854.	7636.	1912.	12477.	54916.	15256.	14348.	5738.	45709.	476.	N 21
N 22	Mining	-0.	-0.	-0.	13.	7.	38.	25.	2.	8.	9.	581.	276.	392.	1134.	742.	4931.	17317.	1160.	5.	N 22
N 23	Utilities	1796.	1426.	1660.	939.	1705.	2725.	4424.	258.	865.	1663.	1071.	3315.	3069.	9247.	6228.	8367.	17800.	14443.	217.	N 23
N 24	Selected services	1460.	930.	671.	2023.	1174.	2887.	4542.	238.	1263.	808.	744.	17871.	3788.	6258.	4671.	4685.	3894.	4679.	44.	N 24
N 25	Trade and transportation	11660.	11726.	14803.	6150.	4934.	7515.	9353.	535.	3522.	2987.	11993.	30971.	36608.	105788.	217678.	57213.	64113.	87223.	644.	N 25
N 26	Unallocated	5769.	2965.	4888.	12704.	15982.	12421.	10158.	566.	6738.	4227.	5663.	28815.	16258.	48980.	54640.	37548.	114734.	67836.	405.	N 26
N 27	Scrap and by-products	6516.	6321.	2664.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3359.	21104.	11719.	29280.	30186.	385.	4501.	1813.	4.	N 27
N 28	Net trade from outside	17317.	33482.	14822.	13381.	9713.	20879.	30050.	1687.	7927.	4279.	13930.	168536.	20813.	148053.	68787.	84908.	57041.	347150.	2354.	N 28
N 29	Maintenance construction	3529.	2421.	2450.	3389.	3064.	5045.	9883.	538.	2122.	1690.	598.	7.	1799.	6191.	4430.	946.	1693.	2124.	46.	N 29
N 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 30
	Households and government	17619.	7026.	76788.	76861.	185828.	245795.	246437.	29592.	120345.	133794.	104943.	83942.	60927.	192418.	396410.	225149.	420046.	714883.	29880.	
S 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 1
S 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 2
S 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 3
S 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 4
S 5	Cotton	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 5
S 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 6
S 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 7
S 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 8
S 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 9
S 10	Miscellaneous agriculture	148.	-0.	211.	784.	4159.	2467.	1346.	112.	794.	751.	-0.	3.	-0.	5408.	3296.	550.	-0.	-0.	-0.	S 10
S 11	Grain mill products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 11
S 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 12
S 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 13
S 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 14
S 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 15
S 16	Chemicals and fertilizers	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 16
S 17	Petroleum	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 17
S 18	Fabricated metals and machinery	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 18
S 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 19
S 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	24.	-0.	7358.	7105.	S 20
S 21	Other manufacturing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 21
S 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 22
S 23	Utilities	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 23
S 24	Selected services	45.	28.	21.	67.	36.	88.	139.	7.	39.	25.	23.	546.	116.	192.	143.	143.	119.	143.	1.	S 24
S 25	Trade and transportation	95.	96.	121.	50.	40.	61.	78.	4.	29.	24.	98.	252.	298.	862.	1734.	466.	523.	711.	5.	S 25
S 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 26
S 27	Scrap and by-products	.862.	1806.	762.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	960.	6032.	3350.	8369.	8627.	110.	1287.	518.	3.	S 27
S 28	Net trade with outside	-0.	0.	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 28
S 29	Maintenance construction	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 29
S 30	New construction	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	
	GROSS OUTLAY	183726.	185219.	224889.	152370.	271172.	254597.	382847.	37435.	163645.	165746.	256231.	603004.	433216.	1268132.	1047587.	591588.	1384724.	1768103.	41401.	G.O.

(Continued on next page)

TABLE B-3 continued

Sector number	Sector title	N 20 Primary metals	N 21 Other mfg.	N 22 Mining	N 23 Utilities	N 24 Selected services	N 25 Trade and trans	N 26 Unallocated	N 27 Scrap and by-prod	N 28 Net trade to outside	N 29 Maint. constr.	N 30 New constr.	N 31 State & local gov.	N 32 Federal gov.	N 33 Inventory accum'n	N 34 Inventory depletn	N 35 Gross pri cap. form.	N 36-37 All house-holds	Sector number
		thousand dollars							thousand dollars										
N 1	Meat animals and products	-0.	19.	-0.	-0.	-0.	-0.	-0.	68.	-0.	-0.	-0.	-0.	-0.	6299.	-0.	-0.	1063.	N 1
N 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	0.	-0.	706.	-0.	-0.	87954.	N 2
N 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	30535.	-0.	-0.	-0.	-0.	0.	1737.	-0.	-0.	6505.	N 3
N 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	4467.	-0.	-0.	-0.	N 4
N 5	Cotton	-0.	1,17.	-0.	-0.	-0.	-0.	-0.	23687.	257243.	-0.	-0.	-0.	-0.	-0.	-10619.	-0.	-0.	N 5
N 6	Vegetables	-0.	0.	-0.	0.	-0.	-0.	-0.	1601.	109704.	-0.	-0.	-0.	1173.	45.	-0.	-0.	106785.	N 6
N 7	Fruit (excluding citrus) & nuts	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	56447.	-0.	-0.	-0.	-0.	-0.	-666.	-0.	15697.	N 7
N 8	Citrus	-0.	-0.	0.	0.	-0.	0.	-0.	-0.	8890.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	16344.	N 8
N 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	2726.	-0.	-0.	-0.	N 9
N 10	Miscellaneous agriculture	-0.	1133.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-844.	-0.	21211.	N 10
N 11	Grain mill products	-0.	5.	-0.	-0.	-0.	96.	54.	983.	-0.	-0.	-0.	944.	-0.	670.	-0.	-0.	99696.	N 11
N 12	Meat and poultry processing	-0.	728.	-0.	-0.	62.	1104.	14965.	7583.	-0.	-0.	920.	4017.	-0.	2401.	-0.	-0.	519070.	N 12
N 13	Dairy products	-0.	44.	-0.	-0.	38.	579.	372.	-0.	-0.	-0.	-0.	2510.	-0.	1725.	-0.	-0.	291933.	N 13
N 14	Canning, preserving, freezing	0.	48.	0.	-0.	27.	497.	280.	-0.	1029812.	-0.	-0.	5294.	-0.	5049.	-0.	-0.	203249.	N 14
N 15	Miscellaneous agri processing	88.	690.	1.	-0.	62.	628.	3918.	4478.	-0.	-0.	-0.	5542.	-0.	3391.	-0.	-0.	793946.	N 15
N 16	Chemicals and fertilizers	4045.	52935.	1982.	217.	5733.	2246.	17634.	6692.	-0.	39504.	21759.	21544.	-0.	28.	-0.	-0.	163604.	N 16
N 17	Petroleum	2792.	8503.	3146.	7661.	7593.	78358.	18806.	1398.	160454.	20881.	51049.	25331.	-0.	-0.	-11719.	-0.	328101.	N 17
N 18	Fabricated metals and machinery	15327.	37891.	5877.	6238.	43066.	27308.	40773.	14877.	-0.	47284.	285279.	47375.	-0.	-0.	-15484.	320084.	419218.	N 18
N 19	Aircraft and parts	5.	559.	-0.	-0.	26389.	1409.	7700.	68.	-0.	-0.	-0.	-0.	-0.	-0.	-11.	2515.	284.	N 19
N 20	Primary metals	77540.	25578.	3303.	832.	215.	2027.	6680.	8168.	-0.	21142.	109468.	-0.	-0.	-0.	-1211.	-0.	651.	N 20
N 21	Other manufacturing	5591.	292,20.	5271.	18260.	40657.	40237.	164430.	6858.	-0.	39397.	256881.	32343.	-0.	-0.	-241.	31756.	626775.	N 21
N 22	Mining	42202.	18209.	15379.	63.	276.	1138.	6054.	-0.	36182.	8355.	3703.	9282.	-0.	-0.	-1283.	-0.	12192.	N 22
N 23	Utilities	11130.	23 00.	4482.	183689.	16297.	117695.	89521.	-0.	-0.	2067.	11626.	46623.	20238.	-0.	-0.	11241.	476555.	N 23
N 24	Selected services	1742.	8861.	309.	1379.	90095.	85268.	73706.	-0.	-0.	14515.	3189.	10349.	224869.	-0.	-0.	434.	768475.	N 24
N 25	Trade and transportation	34448.	119206.	6688.	13865.	47394.	163553.	187912.	9307.	-0.	90662.	353620.	42114.	85165.	-0.	-0.	116114.	2796040.	N 25
N 26	Unallocated	10481.	50377.	7864.	79606.	191955.	572574.	615978.	-0.	-0.	9882.	164749.	85110.	114428.	-0.	-0.	31801.	2889894.	N 26
N 27	Scrap and by-products	12412.	2759.	236.	7109.	2722.	3374.	-0.	-0.	-0.	577.	3150.	-0.	-0.	-0.	-0.	-9141.	219.	N 27
N 28	Net trade from outside	66162.	315937.	13110.	48744.	105834.	177182.	307866.	24506.	-0.	97969.	510743.	90027.	25197.	6186.	-11288.	247498.	1591308.	N 28
N 29	Maintenance construction	2073.	2887.	195.	260068.	10293.	79107.	276022.	-0.	-0.	61.	388.	247180.	50347.	-0.	-0.	-0.	2126.	N 29
N 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	467150.	142544.	-0.	-0.	2035751.	-0.	N 30
	Households and government	171862.	774667.	110416.	463264.	602207.	3384075.	3395564.	-0.	-0.	633855.	1185496.	997929.	2406898.	-0.	-0.	-0.	-0.	
S 1	Meat animals and products	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 1
S 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 2
S 3	Farm dairy products	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 3
S 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 4
S 5	Cotton	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 5
S 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 6
S 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 7
S 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 8
S 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-117.	-0.	2945.	S 9
S 10	Miscellaneous agriculture	-0.	157.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 10
S 11	Grain mill products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 11
S 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 12
S 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 13
S 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 14
S 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 15
S 16	Chemicals and fertilizers	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 16
S 17	Petroleum	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 17
S 18	Fabricated metals and machinery	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 18
S 19	Aircraft and parts	26.	2905.	-0.	-0.	150768.	8047.	43995.	389.	-0.	-0.	-0.	-0.	-0.	-0.	-65.	14371.	1617.	S 19
S 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 20
S 21	Other manufacturing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 21
S 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 22
S 23	Utilities	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 23
S 24	Selected services	53.	271.	10.	42.	2755.	2608.	2254.	-0.	-0.	444.	97.	316.	6871.	-0.	-0.	13.	23502.	S 24
S 25	Trade and transportation	281.	972.	55.	113.	386.	1333.	1532.	76.	-0.	739.	2883.	343.	694.	-0.	-0.	947.	22793.	S 25
S 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 26
S 27	Scrap and by-products	3547.	788.	67.	2032.	778.	964.	-0.	-0.	-0.	165.	900.	-0.	-0.	-0.	-0.	-2613.	63.	S 27
S 28	Net trade with outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 28
S 29	Maintenance construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 29
S 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	
	GROSS OUTLAY	461807.	1740931.	178391.	1093182.	1345602.	4746507.	5275996.	141274.	1658732.	1027499.	2965880.	2141023.	3078224.	35830.	-53548.	2800771.	12287815.	GOL

(Continued on next page.)

TABLE B-3 continued.

Sector number	Sector title	S 1 Meat animals	S 2 Poultry and eggs	S 3 Farm dairy prod	S 4 Grains	S 5 Cotton	S 6 Veg.	S 7 Fruit and nuts	S 8 Citrus	S 9 Forage	S 10 Misc. agri.	S 11 Grain mill prod.	S 12 Meat & poultry proc.	S 13 Dairy prod.	S 14 Canning, preserving, freezing	S 15 Misc. agri. proc	S 16 Chem. and fert	S 17 Petro-leum	S 18 Fab. metals & mach.	S 19 Air-craft	Sector number
		thousand dollars																			
N 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 1
N 2	Poultry and eggs	-0.	4524.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5816.	3.	-0.	210.	-0.	-0.	-0.	-0.	N 2
N 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 3
N 4	Food and feed grains	599.	615.	409.	37.	-0.	-0.	-0.	-0.	-0.	13.	1980.	-0.	-0.	-0.	118.	-0.	-0.	-0.	-0.	N 4
N 5	Cotton	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 5
N 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 6
N 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	45126.	15640.	82.	-0.	-0.	-0.	N 7
N 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 8
N 9	Forage	17574.	-0.	17241.	-0.	-0.	-0.	-0.	-0.	-0.	1384.	963.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 9
N 10	Miscellaneous agriculture	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 10
N 11	Grain mill products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 11
N 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	2.	156.	-0.	15.	51.	12.	-0.	-0.	-0.	N 12
N 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	120.	330.	5400.	435.	703.	116.	-0.	-0.	-0.	N 13
N 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 14
N 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 15
N 16	Chemicals and fertilizers	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 16
N 17	Petroleum	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 17
N 1	Fabricated metals and machinery	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 1
N 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 19
N 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 20
N 21	Other manufacturing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 21
N 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 22
N 23	Utilities	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 23
N 24	Selected services	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 24
N 25	Trade and transportation	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 25
N 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 26
N 27	Scrap and by-products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 27
N 28	Net trade from outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 28
N 29	Maintenance construction	79.	79.	64.	19.	11.	95.	20.	60.	19.	62.	15.	-0.	48.	60.	120.	47.	75.	135.	136.	N 29
N 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	N 30
	Households and government	-0.	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	
S 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	115471.	0.	-0.	-0.	-0.	-0.	-0.	-0.	S 1
S 2	Poultry and eggs	-0.	20401.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	26229.	11.	1.	945.	-0.	-0.	-0.	-0.	S 2
S 3	Farm dairy products	-0.	-0.	3814.	-0.	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	126132.	-0.	-0.	-0.	-0.	-0.	-0.	S 3
S 4	Food and feed grains	3803.	3990.	2656.	241.	-0.	-0.	-0.	-0.	-0.	87.	12852.	-0.	-0.	-0.	762.	-0.	-0.	-0.	-0.	S 4
S 5	Cotton	-0.	-0.	-0.	-0.	67.	-0.	-0.	-0.	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 5
S 6	Vegetables	-0.	-0.	-0.	-0.	-0.	630.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	37547.	-0.	-0.	-0.	-0.	-0.	S 6
S 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	13561.	4700.	24.	-0.	-0.	-0.	S 7
S 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3415.	-0.	-0.	-0.	-0.	-0.	S 8
S 9	Forage	20126.	-0.	19745.	-0.	-0.	-0.	-0.	-0.	-0.	1585.	1104.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 9
S 10	Miscellaneous agriculture	784.	-0.	1182.	1040.	3038.	11045.	656.	2972.	1708.	6564.	-0.	26.	-0.	12415.	21216.	6445.	-0.	-0.	-0.	S 10
S 11	Grain mill products	11918.	32512.	11283.	-0.	-0.	-0.	-0.	-0.	-0.	169.	1722.	-0.	113.	1173.	22680.	1157.	-0.	-0.	-0.	S 11
S 12	Meat and poultry processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	297.	21346.	-0.	2061.	7030.	1638.	-0.	-0.	-0.	S 12
S 13	Dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	475.	1100.	21285.	1712.	2758.	458.	-0.	-0.	-0.	S 13
S 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5556.	2995.	304.	-0.	-0.	-0.	S 14
S 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	7815.	-0.	17291.	13306.	47343.	19242.	395.	20.	-0.	S 15
S 16	Chemicals and fertilizers	337.	448.	143.	1117.	747.	7746.	1355.	4347.	1040.	2177.	4812.	1782.	6999.	5887.	15672.	177828.	36760.	26848.	5292.	S 16
S 17	Petroleum	149.	1325.	64.	1131.	329.	3755.	718.	1876.	1047.	1692.	438.	1247.	1640.	2002.	-0.	-0.	803466.	11004.	4792.	S 17
S 18	Fabricated metals and machinery	2534.	2061.	1889.	2134.	533.	6473.	1156.	3193.	2145.	3220.	1606.	3351.	2219.	41016.	16429.	16952.	35270.	591587.	205162.	S 18
S 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	0.	-0.	-0.	-0.	-0.	39.	-0.	15818.	711314.	S 19
S 20	Primary metals	14.	10.	6.	1.	1.	12.	2.	5.	1.	8.	-0.	12.	8.	332.	477.	6686.	520.	337448.	76574.	S 20
S 21	Other manufacturing	614.	880.	512.	189.	96.	4859.	696.	2279.	189.	1158.	7000.	2539.	12331.	19573.	15243.	26118.	9348.	106485.	51644.	S 21
S 22	Mining	-0.	-0.	-0.	2.	1.	20.	1.	5.	2.	10.	419.	288.	305.	318.	583.	7048.	22156.	2123.	407.	S 22
S 23	Utilities	897.	840.	880.	117.	141.	1153.	204.	648.	136.	1371.	597.	2677.	1846.	2006.	3787.	9266.	17645.	20473.	14306.	S 23
S 24	Selected services	971.	729.	474.	338.	129.	1624.	278.	796.	341.	887.	553.	19199.	3030.	1806.	3778.	6903.	5134.	8872.	3843.	S 24
S 25	Trade and transportation	7582.	8988.	10213.	1003.	530.	4136.	560.	1748.	931.	3208.	8705.	32549.	28846.	29853.	168262.	82455.	82700.	160890.	55309.	S 25
S 26	Unallocated	4378.	2652.	3935.	2419.	2004.	7976.	710.	2159.	2079.	5298.	4797.	35337.	14845.	16128.	50441.	63143.	172687.	146005.	40589.	S 26
S 27	Scrap and by-products	5404.	6179.	2345.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	3169.	28289.	11697.	10538.	30459.	707.	7406.	4266.	993.	S 27
S 28	Net trade with outside	27089.	47420.	22892.	1903.	555.	7208.	1184.	3659.	1180.	3407.	49134.	243162.	31773.	33597.	75060.	96464.	38619.	491356.	148329.	S 28
S 29	Maintenance construction	2198.	1776.	1618.	529.	315.	2658.	567.	1685.	537.	1738.	416.	7.	1348.	1673.	3356.	1306.	2092.	3750.	3791.	S 29
S 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	S 30
	Households and government	11365.	5342.	52550.	12440.	19802.	134163.	14647.	95958.	31568.	142525.	75557.	87508.	47291.	53861.	311386.	321860.	537426.	1307989.	2205137.	
	GROSS OUTLAY	118505.	140831.	153915.	24660.	28897.	193553.	22754.	121390.	42923.	176565.	184488.	628621.	336281.	354973.	822101.	845697.	1771699.	3235019.	3527618.	0.0.

(Continued on next page.)

TABLE B 3 continued

Sector number	Sector title	S 20 Primary metals	S 21 Other mfg.	S 22 Mining	S 23 Utilities	S 24 Selected services	S 25 Trade and trans.	S 26 Unal-located	S 27 Scrap and by-prod	S 28 Net trade with outside	S 29 Maint. constr.	S 30 New constr.	S 31 State & local gov.	S 32 Federal gov.	S 33 Inven-tory addit'n	S 34 Inven-tory deplet'n	S 35 Gross pri cap. form.	S 36-37 All house-holds	GROSS DOMESTIC OUTPUT b/	Sector number
		thousand dollars							thousand dollars											
N 1	Meat animals and products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	183726.	N 1
N 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	97.	-0.	-0.	20576.	185221.	N 2
N 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	224898.	N 3
N 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	27.	-0.	-0.	-0.	152369.	N 4
N 5	Cotton	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	271173.	N 5
N 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	354597.	N 6
N 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-31.	-0.	14901.	382846.	N 7
N 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	37435.	N 8
N 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	319.	-0.	-0.	-0.	163643.	N 9
N 10	Miscellaneous agriculture	-0.	-0.	-0.	-0.	-0.	-0.	-3.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	165748.	N 10
N 11	Grain mill products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	256240.	N 11
N 12	Meat and poultry processing	-0.	8.	-0.	-0.	1.	9.	145.	47.	-0.	-0.	7.	32.	-0.	15.	-0.	-0.	4101.	603005.	N 12
N 13	Dairy products	-0.	17.	-0.	-0.	14.	179.	120.	-0.	-0.	-0.	-0.	667.	-0.	264.	-0.	-0.	76941.	433217.	N 13
N 14	Canning, preserving, freezing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1268131.	N 14
N 15	Miscellaneous agri. processing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1047589.	N 15
N 16	Chemicals and fertilizers	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0	591587.	N 16
N 17	Petroleum	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1384718.	N 17
N 18	Fabricated metals and machinery	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1768108.	N 18
N 19	Aircraft and parts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	41403.	N 19
N 20	Primary metals	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	461809.	N 20
N 21	Other manufacturing	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1740935.	N 21
N 22	Mining	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	178392.	N 22
N 23	Utilities	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1093182.	N 23
N 24	Selected services	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	1345801.	N 24
N 25	Trade and transportation	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	4746504.	N 25
N 26	Unallocated	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	5275996.	N 26
N 27	Scrap and by-products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	141274.	N 27
N 28	Net trade from outside	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	4682090.	N 28
N 29	Maintenance construction	118.	189.	8.	9306.	653.	3674.	15700.	-0.	-0.	3.	16.	11547.	2352.	-0.	-0.	-0.	102.	1027524.	N 29
N 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	51451.	15700.	-0.	-0.	253285.	-0.	2965881.	N 30
	Households and government	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	17490314.	
S 1	Meat animals and products	-0.	23.	-0.	-0.	-0.	-0.	-0.	28.	-0.	-0.	-0.	-0.	-0.	2553.	-0.	-0.	431.	118506.	S 1
S 2	Poultry and eggs	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	437.	-0.	-0.	92789.	140813.	S 2
S 3	Farm dairy products	-0.	-0.	-0.	-0.	-0.	-0.	-0.	18870.	-0.	-0.	-0.	-0.	-0.	1074.	-0.	-0.	4020.	153910.	S 3
S 4	Food and feed grains	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	179.	-0.	-0.	-0.	24660.	S 4
S 5	Cotton	-0.	438.	-0.	-0.	-0.	-0.	-0.	2524.	26999.	-0.	-0.	-0.	-0.	-0.	-1132.	-0.	-0.	28896.	S 5
S 6	Vegetables	-0.	-0.	-0.	-0.	-0.	-0.	-0.	874.	16732.	-0.	-0.	-0.	1583.	24.	-0.	-0.	136163.	193553.	S 6
S 7	Fruit (excluding citrus) & nuts	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	4479.	22755.	S 7
S 8	Citrus	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	93579.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	22396.	121390.	S 8
S 9	Forage	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	365.	-0.	-0.	-0.	42925.	S 9
S 10	Miscellaneous agriculture	-0.	2442.	-0.	-0.	-0.	-0.	-0.	-0.	50105.	-0.	-0.	-0.	-0.	-0.	-1024.	-0.	32337.	176563.	S 10
S 11	Grain mill products	-0.	7.	-0.	-0.	-0.	89.	67.	526.	-0.	-0.	-0.	-0.	-0.	360.	-0.	-0.	99496.	184487.	S 11
S 12	Meat and poultry processing	-0.	1111.	-0.	-0.	92.	1193.	19826.	6375.	-0.	-0.	900.	4371.	-0.	2018.	-0.	-0.	560365.	628620.	S 12
S 13	Dairy products	-0.	65.	-0.	-0.	54.	704.	475.	-0.	-0.	-0.	-0.	2628.	-0.	1039.	-0.	-0.	303304.	334259.	S 13
S 14	Canning, preserving, freezing	-0.	91.	-0.	-0.	50.	667.	461.	-0.	64219.	-0.	-0.	7142.	-0.	1613.	-0.	-0.	272076.	354974.	S 14
S 15	M'scellaneous agri. processing	96.	861.	1.	-0.	74.	557.	4249.	2319.	-0.	-0.	-0.	4935.	-0.	1963.	-0.	-0.	701633.	822100.	S 15
S 16	Chemicals and fertilizers	7504.	112950.	2712.	252.	11841.	3395.	32644.	10781.	-0.	54101.	29800.	32752.	-0.	45.	-0.	-0.	245583.	845497.	S 16
S 17	Petroleum	4594.	16100.	3821.	7917.	13917.	105107.	30892.	1788.	233089.	25377.	62042.	34173.	-0.	-0.	-14993.	-0.	411198.	1771699.	S 17
S 18	Fabricated metals and machinery	32285.	91806.	9132.	8247.	100999.	38289.	85704.	34829.	-0.	73531.	443633.	81260.	-0.	-0.	-36248.	624168.	708453.	3235018.	S 18
S 19	Aircraft and parts	50.	6465.	-0.	-0.	324703.	12684.	84920.	38929.	2074241.	-0.	-0.	-0.	-0.	-0.	-6458.	25733.	2638.	3527616.	S 19
S 20	Primary metals	118100.	44814.	3712.	796.	363.	2515.	10124.	12444.	-0.	23775.	123100.	-0.	-0.	-0.	-1844.	-0.	803.	760219.	S 20
S 21	Other manufacturing	11720.	704536.	8151.	24025.	94883.	68722.	343926.	16534.	-0.	60963.	397510.	55558.	-0.	-0.	-581.	61619.	1187163.	3296482.	S 21
S 22	Mining	69473.	34479.	18675.	65.	507.	1527.	9945.	-0.	6411.	10155.	4500.	12521.	-0.	-0.	-1558.	-0.	16242.	216630.	S 22
S 23	Utilities	14196.	33741.	4216.	147059.	23141.	122311.	113932.	-0.	-0.	1946.	10946.	48730.	21152.	-0.	-0.	13272.	496001.	1129635.	S 23
S 24	Selected services	2955.	17291.	387.	1469.	170181.	117874.	124779.	-0.	481913.	18181.	3969.	14389.	312363.	-0.	-0.	682.	1099086.	2466306.	S 24
S 25	Trade and transportation	57172.	227559.	8189.	14444.	87575.	221173.	311200.	12586.	49176.	111083.	433268.	57277.	115829.	-0.	-0.	178309.	3754938.	6366828.	S 25
S 26	Unallocated	20296.	112213.	11234.	96769.	413873.	983485.	1190321.	-0.	-0.	14128.	235535.	135068.	181596.	-0.	-0.	57012.	4717807.	8666919.	S 26
S 27	Scrap and by-products	26273.	6717.	368.	9445.	6416.	5818.	-0.	-0.	-0.	901.	4923.	-0.	-0.	-0.	-0.	-17914.	375.	195091.	S 27
S 28	Net trade with outside	109178.	411570.	11712.	71696.	94992.	115106.	271848.	35637.	-0.	84195.	413150.	85980.	12918.	7841.	-12639.	222981.	1766606.	5028694.	S 28
S 29	Maintenance construction	3295.	9279.	229.	259434.	18213.	102437.	437726.	-0.	-0.	71.	458.	321917.	65569.	-0.	-0.	-0.	2766.	1248750.	S 29
S 30	New construction	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	-0.	578767.	176602.	-0.	-0.	2849155.	-0.	3604524.	S 30
	Households and government	282917.	1465789.	134084.	478712.	1103763.	4539303.	5577915.	-0.	-0.	770344.	1440770.	1346278.	3247080.	-0.	-0.	-0.	-0.	25854952.	
	GROSS OUTLAY	760218.	3296481.	216631.	1129636.	2466305.	6366826.	8666917.	195091.	3098464.	1248754.	3604525.	2888392.	4152744.	20053.	-76517.	4268312.	16755769.	122230625.	G.O.

a/ Each entry shows the value of goods and services produced by N. California or S. California sector listed at the left that were purchased by the N. California or S. California sector listed at the top.

b/ Some column and row totals do not add up exactly due to rounding.

Technical Coefficients

Table B-4 presents the direct requirements per dollar of output in the combined North-South California economy and corresponds to Equation (B-2a) - (B-2d).

Direct and Indirect Coefficients

Table B-5 shows direct and indirect requirements (inverse coefficients) per dollar of final demand for each of the sectors in the North-South California economy.

TABLE B-4

Direct Requirements Per Dollar of Output, Northern California and Southern California, 1958 a/

Sector number	Sector title	N 1 Meat animals	N 2 Poultry and eggs	N 3 Farm dairy prod.	N 4 Grains	N 5 Cotton	N 6 Veg.	N 7 Fruit and nuts	N 8 Citrus	N 9 Forage	N 10 Misc. agri.	N 11 Grain mill prod.	N 12 Meat & poultry proc.	N 13 Dairy prod.	N 14 Canning, preserving, freezing	N 15 Misc. agri. proc.	N 16 Chem. and fert.	N 17 Petro-leum	N 18 Fab. metals & mach.	N 19 Air-craft	Sector number
N 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.292331	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	1
N 2	Poultry and eggs	-0.000000	0.177865	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.051222	0.000044	0.000004	0.001413	-0.000000	-0.000000	-0.000000	-0.000000	2
N 3	Farm dairy products	-0.000000	-0.000000	0.027440	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.415382	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	3
N 4	Food and feed grains	0.133111	0.114853	0.069937	0.039548	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001985	0.282352	-0.000000	-0.000000	-0.000000	0.003761	-0.000000	-0.000000	-0.000000	-0.000000	4
N 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	0.002323	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	5
N 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.003252	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.105774	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	6
N 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.165327	0.026742	0.000125	-0.000000	-0.000000	-0.000000	7
N 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.009621	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	8
N 9	Forage	0.931164	-0.000000	0.251062	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.017569	0.011704	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	9
N 10	Miscellaneous agriculture	0.009813	-0.000000	0.006746	0.037035	0.110480	0.050108	0.025323	0.021477	0.034948	0.032640	-0.000000	0.000035	-0.000000	0.030711	0.022862	0.006892	-0.000000	-0.000000	-0.000000	10
N 11	Grain mill products	0.134871	0.312265	0.098337	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001279	0.012516	-0.000000	0.000452	0.004432	0.037331	0.001834	-0.000000	-0.000000	-0.000000	11
N 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.041128	-0.000000	0.000000	0.007198	0.010602	0.002397	-0.000000	-0.000000	-0.000000	12
N 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000000	0.003313	0.002665	0.081560	0.006216	0.004322	0.000698	-0.000000	-0.000000	-0.000000	13
N 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.015651	0.003643	0.000358	-0.000000	-0.000000	-0.000000	14
N 15	Miscellaneous agri. processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.064163	-0.000000	0.077894	0.056778	0.087232	0.034467	0.000338	0.000009	-0.000000	15
N 16	Chemicals and fertilizers	0.002520	0.002829	0.000827	0.042218	0.022937	0.035514	0.052833	0.031788	0.021504	0.010944	0.023147	0.002516	0.018471	0.014718	0.016917	0.186599	0.018412	0.007365	0.001328	16
N 17	Petroleum	0.001263	0.029403	0.000418	0.045842	0.011399	0.019399	0.031537	0.015440	0.024394	0.009581	0.002373	0.001985	0.004875	0.005639	-0.000000	-0.000000	0.453409	0.003401	0.001353	17
N 18	Fabricated metals and machinery	0.016315	0.011441	0.009596	0.067605	0.014430	0.026137	0.039679	0.020569	0.039060	0.014251	0.006802	0.004167	0.005157	0.090302	0.015618	0.015666	0.015558	0.142916	0.045458	18
N 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000007	-0.000000	0.000728	0.030023	19
N 20	Primary metals	0.000131	0.000076	0.000049	0.000059	0.000033	0.000063	0.000069	0.000053	0.000024	0.000048	-0.000000	0.000020	0.000025	0.001012	0.000627	0.007779	0.000317	0.112733	0.023454	20
N 21	Other manufacturing	0.004077	0.024708	0.002610	0.006031	0.002611	0.019718	0.024012	0.014746	0.003465	0.005152	0.029801	0.003171	0.028801	0.043305	0.014563	0.024253	0.004144	0.025852	0.011497	21
N 22	Mining	-0.000000	-0.000000	-0.000000	0.000085	0.000026	0.000107	0.000065	0.000053	0.000049	0.000054	0.002267	0.000458	0.000905	0.000894	0.000708	0.008335	0.012506	0.000656	0.000121	22
N 23	Utilities	0.009775	0.007699	0.007381	0.006163	0.006288	0.007685	0.011556	0.006892	0.004044	0.010033	0.004180	0.005497	0.007084	0.007292	0.005945	0.014143	0.012855	0.008169	0.005241	23
N 24	Selected services	0.007947	0.005021	0.002984	0.013277	0.004329	0.008142	0.011864	0.006358	0.007718	0.004875	0.002904	0.029637	0.008744	0.004935	0.004459	0.007919	0.002812	0.002646	0.001063	24
N 25	Trade and transportation	0.063464	0.063309	0.065824	0.040362	0.018195	0.021193	0.024430	0.014291	0.021522	0.018022	0.046804	0.051361	0.084503	0.083420	0.203017	0.096711	0.046300	0.049331	0.015555	25
N 26	Unallocated	0.031400	0.016008	0.021735	0.083376	0.058937	0.035028	0.026533	0.015120	0.041174	0.025503	0.022101	0.047786	0.037529	0.038624	0.052158	0.063470	0.082857	0.038367	0.009782	26
S 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 1
S 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 2
S 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 3
S 4	Food and feed grains	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 4
S 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 5
S 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 6
S 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 7
S 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 8
S 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 9
S 10	Miscellaneous agriculture	0.000806	-0.000000	0.000938	0.005145	0.015337	0.006957	0.003516	0.002992	0.004852	0.004531	-0.000000	0.000005	-0.000000	0.004265	0.003146	0.000930	-0.000000	-0.000000	-0.000000	S 10
S 11	Grain mill products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 11
S 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 12
S 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 13
S 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 14
S 15	Miscellaneous agri. processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 15
S 16	Chemicals and fertilizers	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 16
S 17	Petroleum	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 17
S 18	Fabricated metals and machinery	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 18
S 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000041	-0.000000	0.004162	0.171614	S 19
S 20	Primary metals	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.080000	S 20
S 21	Other manufacturing	-0.000000	-0.000000	-0.000000	0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 21
S 22	Mining	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 22
S 23	Utilities	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 23
S 24	Selected services	0.000245	0.000151	0.000093	0.000407	0.000133	0.000248	0.000363	0.000187	0.000238	0.000151	0.000090	0.000905	0.000268	0.000151	0.000137	0.000242	0.000086	0.000081	0.000024	S 24
S 25	Trade and transportation	0.000517	0.000518	0.000538	0.000328	0.000148	0.000172	0.000199	0.000107	0.000177	0.000145	0.000382	0.000418	0.000688	0.000680	0.001655	0.000788	0.000378	0.000402	0.000121	S 25
S 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 26

(continued on next page.)

a/ Each entry shows dollars of direct purchases from the N. California or S. California sector listed at the left by the N. California or S. California sector listed at the top per dollar of output of the latter sector.

TABLE B-4 continued.

Sector number	Sector title	N 20 Primary metals	N 21 [illegible]	N 22 Mining	N 23 Utilities	N 24 [illegible]	N 25 Trade and trans	N 26 Unallocated	S 1 Meat animals
N 1	Meat animals and products	-0.000000	0.000011	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 4	Food and feed grains	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.005055
N 5	Cotton	-0.000000	0.000133	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.148298
N 10	Miscellaneous agriculture	-0.000000	0.002651	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 11	Grain mill products	-0.000000	0.000003	-0.000000	-0.000000	-0.000000	0.000020	0.000010	-0.000000
N 12	Meat and poultry processing	-0.000000	0.000418	-0.000000	-0.000000	0.000046	0.000233	0.002836	-0.000000
N 13	Dairy products	-0.000000	0.000025	-0.000000	-0.000000	0.000028	0.000143	0.000071	-0.000000
N 14	Canning, preserving, freezing	-0.000000	0.000028	-0.000000	-0.000000	0.000020	0.000105	0.000053	-0.000000
N 15	Miscellaneous agri processing	0.000191	0.000396	0.000006	-0.000000	0.000046	0.000132	0.000743	-0.000000
N 16	Chemicals and fertilizers	0.008759	0.033406	0.011110	0.000199	0.004261	0.000473	0.003342	-0.000000
N 17	Petroleum	0.006046	0.004884	0.017635	0.007008	0.005643	0.016509	0.003564	-0.000000
N 18	Fabricated metals and machinery	0.033189	0.021765	0.032944	0.005706	0.032005	0.004700	0.007728	-0.000000
N 19	Aircraft and parts	0.000011	0.000292	-0.000000	-0.000000	0.019611	0.000297	0.001459	-0.000000
N 20	Primary metals	0.167906	0.014592	0.018516	0.000761	0.000160	0.000427	0.001262	-0.000000
N 21	Other manufacturing	0.012107	0.167853	0.029547	0.016704	0.030215	0.008477	0.031166	-0.000000
N 22	Mining	0.091384	0.013459	0.086210	0.000058	0.000205	0.000240	0.001147	-0.000000
N 23	Utilities	0.024101	0.013211	0.025125	0.168031	0.012111	0.024796	0.016968	-0.000000
N 24	selected services	0.003772	0.005090	0.001732	0.001261	0.066955	0.017964	0.013970	-0.000000
N 25	Trade and transportation	0.074594	0.068473	0.037491	0.012683	0.035221	0.034458	0.035616	-0.000000
N 26	Unallocated	0.022696	0.028937	0.044083	0.072820	0.142654	0.120631	0.116751	-0.000000
S 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 2	Poultry and eggs	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 4	Food and feed grains	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.032851
S 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.169832
S 10	Miscellaneous agriculture	-0.000000	0.000090	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.006616
S 11	Grain mill products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.100570
S 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 15	Miscellaneous agri processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 16	Chemicals and fertilizers	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.002844
S 17	Petroleum	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001257
S 18	Fabricated metals and machinery	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.021383
S 19	Aircraft and parts	0.000056	0.001869	-0.000000	-0.000000	0.112045	0.001695	0.008339	-0.000000
S 20	Primary metals	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000118
S 21	Other manufacturing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.005181
S 22	Mining	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 23	Utilities	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.007569
S 24	selected services	0.000115	0.000156	0.000056	0.000038	0.002047	0.000549	0.000427	0.008194
S 25	Trade and transportation	0.000608	0.000558	0.000308	0.000103	0.000287	0.000281	0.000290	0.063980
S 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.036944

Sector number	Sector title	S 2 Poultry and eggs	S 3 Farm dairy prod	S 4 Grains	S 5 Cotton	S 6 Veg	S 7 Fruit and nuts	S 8 Citrus	S 9 Forage	S 10 Misc agr.	S 11 Grain mill prod	S 12 Meat & poultry proc
N 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 2	Poultry and eggs	0.032127	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.009232
N 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 4	Food and feed grains	0.004367	0.002657	0.001500	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000074	0.010732	-0.000000
N 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 9	Forage	-0.000000	0.112021	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 10	Miscellaneous agriculture	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.007838	0.005220	-0.000000
N 11	Grain mill products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000011	0.000248
N 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000450	0.000525
N 15	Miscellaneous agri processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 16	Chemicals and fertilizers	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 17	Petroleum	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 18	Fabricated metals and machinery	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 20	Primary metals	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 21	Other manufacturing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 22	Mining	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 23	Utilities	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 24	selected services	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 25	Trade and transportation	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
N 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.183689
S 2	Poultry and eggs	0.144877	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.041725
S 3	Farm dairy products	-0.000000	0.024781	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 4	Food and feed grains	0.028335	0.017257	0.009773	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000493	0.069463	-0.000000
S 5	Cotton	-0.000000	-0.000000	-0.000000	0.002319	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	0.003255	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 7	Fruit (excluding citrus) & nuts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 9	Forage	-0.000000	0.128290	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.008977	0.005984	-0.000000
S 10	Miscellaneous agriculture	-0.000000	0.007660	0.042174	0.125826	0.057065	0.028830	0.024483	0.039792	0.037176	-0.000000	0.000041
S 11	Grain mill products	0.231309	0.073310	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000957	0.009334	-0.000000
S 12	Meat and poultry processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.001610	0.033957
S 13	Dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.002575	0.002068
S 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 15	Miscellaneous agri processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.042360	-0.000000
S 16	Chemicals and fertilizers	0.003181	0.000929	0.045296	0.025850	0.040020	0.059550	0.035810	0.024229	0.012330	0.026083	0.002835
S 17	Petroleum	0.009409	0.000416	0.045864	0.011385	0.019400	0.031555	0.015454	0.024393	0.009583	0.002374	0.001984
S 18	Fabricated metals and machinery	0.014436	0.012273	0.086537	0.018445	0.033443	0.050804	0.026304	0.049973	0.018237	0.008705	0.005331
S 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000
S 20	Primary metals	0.000071	0.000039	0.000041	0.000035	0.000062	0.000088	0.000041	0.000023	0.000045	-0.000000	0.000019
S 21	Other manufacturing	0.006249	0.003327	0.007664	0.003322	0.025104	0.030588	0.018774	0.004403	0.006558	0.037943	0.004039
S 22	Mining	-0.000000	-0.000000	0.000081	0.000035	0.000103	0.000044	0.000041	0.000047	0.000057	0.002271	0.000458
S 23	Utilities	0.005965	0.005718	0.004745	0.004879	0.005957	0.008965	0.005338	0.003168	0.007776	0.003236	0.004259
S 24	selected services	0.005177	0.003080	0.013706	0.004464	0.008391	0.012218	0.006557	0.007944	0.005024	0.002997	0.030541
S 25	Trade and transportation	0.063828	0.066357	0.040673	0.018341	0.021369	0.024611	0.014400	0.021690	0.018169	0.047185	0.051778
S 26	Unallocated	0.018833	0.025567	0.098094	0.069350	0.041209	0.031203	0.017786	0.048436	0.030006	0.026002	0.056214

Continued on next page

TABLE B-4 continued.

Sector number	Sector title	S 13 Dairy prod	S 14 Canning, preserving, freezing	S 15 Misc agri proc	S 16 Chem and fert	S 17 Petro-leum	S 18 Fab metals & mach	S 19 Air-craft	S 20 Primary metals	S 21 Other mfg	S 22 Mining	S 23 Utilities	S 24 Selected services	S 25 Trade and trans	S 26 Unal-located	Sector number
N 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 1
N 2	Poultry and eggs	0.000009	-0.000000	0.000255	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 2
N 3	Farm dairy products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 3
N 4	Food and feed grains	-0.000000	-0.000000	0.000144	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 4
N 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 5
N 6	Vegetables	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 6
N 7	Fruit (excluding citrus) & nuts	-0.000000	0.127125	0.019024	0.000097	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 7
N 8	Citrus	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 8
N 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 9
N 10	Miscellaneous agriculture	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 10
N 11	Grain mill products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 11
N 12	Meat and poultry processing	-0.000000	0.000042	0.000062	0.000014	-0.000000	-0.000000	-0.000000	-0.000000	0.000002	-0.000000	-0.000000	0.000000	0.000001	0.000017	N 12
N 13	Dairy products	0.016059	0.001225	0.000851	0.000137	-0.000000	-0.000000	-0.000000	-0.000000	0.000005	-0.000000	-0.000000	0.000006	0.000028	0.000014	N 13
N 14	Canning, preserving, freezing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 14
N 15	Miscellaneous agri. processing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 15
N 16	Chemicals and fertilizers	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 16
N 17	Petroleum	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 17
N 18	Fabricated metals and machinery	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 18
N 19	Aircraft and parts	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 19
N 20	Primary metals	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 20
N 21	Other manufacturing	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 21
N 22	Mining	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 22
N 23	Utilities	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 23
N 24	Selected services	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 24
N 25	Trade and transportation	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 25
N 26	Unallocated	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	N 26
S 1	Meat animals and products	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000007	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 1
S 2	Poultry and eggs	0.000033	0.000003	0.001149	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 2
S 3	Farm dairy products	0.375101	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 3
S 4	Food and feed grains	-0.000000	-0.000000	0.000927	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 4
S 5	Cotton	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	0.000133	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 5
S 6	Vegetables	-0.000000	0.105774	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 6
S 7	Fruit (excluding citrus) & nuts	-0.000000	0.038203	0.005717	0.000028	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 7
S 8	Citrus	-0.000000	0.009620	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 8
S 9	Forage	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 9
S 10	Miscellaneous agriculture	-0.000000	0.034974	0.025807	0.007621	-0.000000	-0.000000	-0.000000	-0.000000	0.000741	-0.000000	-0.000000	-0.000000	-0.000000	-0.000000	S 10
S 11	Grain mill products	0.000336	0.003304	0.027831	0.001368	-0.000000	-0.000000	-0.000000	-0.000000	0.000002	-0.000000	-0.000000	-0.000000	0.000015	0.000008	S 11
S 12	Meat and poultry processing	-0.000000	0.005806	0.008551	0.001933	-0.000000	-0.000000	-0.000000	-0.000000	0.000337	-0.000000	-0.000000	0.000037	0.000187	0.002288	S 12
S 13	Dairy products	0.063299	0.004823	0.003355	0.000542	-0.000000	-0.000000	-0.000000	-0.000000	0.000020	-0.000000	-0.000000	0.000022	0.000111	0.000055	S 13
S 14	Canning, preserving, freezing	-0.000000	0.015652	0.003643	0.000359	-0.000000	-0.000000	-0.000000	-0.000000	0.000028	-0.000000	-0.000000	0.000020	0.000105	0.000053	S 14
S 15	Miscellaneous agri processing	0.051421	0.037485	0.057588	0.022753	0.000223	0.000006	-0.000000	0.000126	0.000261	0.000005	-0.000000	0.000030	0.000087	0.000490	S 15
S 16	Chemicals and fertilizers	0.020814	0.016584	0.019063	0.210274	0.020748	0.008299	0.001500	0.009871	0.034264	0.012519	0.000223	0.004801	0.000533	0.003767	S 16
S 17	Petroleum	0.004877	0.005640	-0.000000	-0.000000	0.453500	0.003402	0.001358	0.006046	0.004884	0.017638	0.007008	0.005643	0.016509	0.003564	S 17
S 18	Fabricated metals and machinery	0.006599	0.115547	0.019984	0.020045	0.019907	0.182870	0.058159	0.042468	0.027850	0.042155	0.007301	0.040952	0.006014	0.009889	S 18
S 19	Aircraft and parts	0.000000	-0.000000	-0.000000	0.000046	-0.000000	0.004690	0.201641	0.000066	0.001961	-0.000000	-0.000000	0.131656	0.001992	0.009798	S 19
S 20	Primary metals	0.000024	0.000939	0.000580	0.007196	0.000294	0.104311	0.021707	0.155350	0.013594	0.017135	0.000705	0.000147	0.000395	0.001168	S 20
S 21	Other manufacturing	0.036671	0.055139	0.018542	0.030883	0.005276	0.032916	0.014640	0.015417	0.213724	0.037626	0.021268	0.038472	0.010794	0.039683	S 21
S 22	Mining	0.000907	0.000896	0.000709	0.008334	0.012506	0.000656	0.000115	0.091386	0.010459	0.086206	0.000058	0.000206	0.000240	0.001147	S 22
S 23	Utilities	0.005490	0.005651	0.004606	0.010957	0.009959	0.006329	0.004055	0.018674	0.010235	0.019462	0.130183	0.009383	0.019211	0.013146	S 23
S 24	Selected services	0.009011	0.005088	0.004596	0.008162	0.002898	0.002727	0.001089	0.003887	0.005249	0.001786	0.001300	0.069002	0.018514	0.014397	S 24
S 25	Trade and transportation	0.085198	0.084099	0.204673	0.097499	0.046678	0.049734	0.015679	0.075205	0.069031	0.057802	0.012786	0.035509	0.034738	0.035907	S 25
S 26	Unallocated	0.044147	0.045434	0.061356	0.074664	0.097470	0.045133	0.011506	0.026698	0.034040	0.051858	0.085664	0.167811	0.141905	0.137341	S 26

TABLE B-5

Direct and Indirect Requirements Per Dollar of Final Demand, Northern California and Southern California, 1958[1/]

Sector number	Sector title	N 1 Meat animals	N 2 Poultry and eggs	N 3 Farm dairy prod	N 4 Grains	N 5 Cotton	N 6 Veg.	N 7 Fruit and nuts	N 8 Citrus	N 9 Forage	N 10 Misc. agri.	N 11 Grain mill prod.	N 12 Meat & poultry proc.	N 13 Dairy prod.	N 14 Canning, preserving, freezing	N 15 Misc. agri proc.	N 16 Chem. and fert.	N 17 Petro-leum	N 18 Fab. metals & mach.	N 19 Air-craft	Sector number
N 1	Meat animals and products	1.000238	0.000443	0.000175	0.000171	0.000103	0.000100	0.000117	0.000068	0.000086	0.000054	0.000982	0.305353	0.000495	0.002588	0.003741	0.001183	0.000224	0.000090	0.000026	N 1
N 2	Poultry and eggs	0.000069	1.216487	0.000051	0.000040	0.000024	0.000024	0.000030	0.000017	0.000020	0.000013	0.000336	0.065098	0.000132	0.000670	0.002689	0.000333	0.000052	0.000020	0.000006	N 2
N 3	Farm dairy products	0.000254	0.000673	1.028405	0.000134	0.000019	0.000025	0.000035	0.000021	0.000017	0.000012	0.001745	0.001418	0.465336	0.003121	0.002338	0.000524	0.000035	0.000015	0.000005	N 3
N 4	Food and feed grains	0.179079	0.258459	0.105220	1.041407	0.000345	0.000209	0.000176	0.000121	0.000144	0.002567	0.299307	0.068634	0.049342	0.003394	0.018112	0.001745	0.000120	0.000042	0.000011	N 4
N 5	Cotton	0.000003	0.000034	0.000002	0.000003	1.002330	0.000004	0.000005	0.000003	0.000001	0.000001	0.000006	0.000032	0.000007	0.000010	0.000004	0.000006	0.000003	0.000006	0.000002	N 5
N 6	Vegetables	0.000307	0.000015	0.000005	0.000005	0.000003	1.003266	0.000005	0.000003	0.000002	0.000001	0.000033	0.000305	0.000043	0.107837	0.000437	0.000069	0.000005	0.000002	0.000001	N 6
N 7	Fruit (excluding citrus) & nuts	0.000284	0.000131	0.000210	0.000042	0.000058	1.000184	0.000050	0.000037	0.000023	0.000183	0.001142	0.002501	0.169645	0.027916	0.001429	0.000077	0.000023	0.000007	0.000007	N 7
N 8	Citrus	0.000031	0.000031	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000003	0.000030	0.000004	0.000777	0.000040	0.000006	0.000000	0.000000	0.000000	N 8
N 9	Forage	0.334589	0.005311	0.259846	0.008624	0.002190	0.001023	0.000552	0.000452	1.000715	0.018254	0.012920	0.102735	0.117813	0.002574	0.002856	0.000760	0.000094	0.000038	0.000012	N 9
N 10	Miscellaneous agriculture	0.029431	0.000220	0.020923	0.040364	0.114824	0.052409	0.026777	0.022566	0.036400	1.034635	0.014109	0.008467	0.012075	0.044661	0.027735	0.009842	0.000395	0.000156	0.000043	N 10
N 11	Grain mill products	0.137141	0.383498	0.102822	0.300268	0.000282	0.000253	0.000297	0.000186	0.000169	0.001412	1.015994	0.062549	0.050816	0.008081	0.043316	0.004416	0.000235	0.000078	0.000020	N 11
N 12	Meat and poultry processing	0.005813	0.001519	0.000599	0.000684	0.000352	0.000340	0.000198	0.000233	0.000292	0.000186	0.003359	1.044544	0.001692	0.008850	0.012795	0.004044	0.000766	0.000305	0.000088	N 12
N 13	Dairy products	0.000596	0.001376	0.000447	0.000079	0.000044	0.000059	0.000081	0.000048	0.000041	0.000029	0.004085	0.003319	1.089522	0.007308	0.005473	0.001226	0.000082	0.000036	0.000011	N 13
N 14	Canning, preserving, freezing	0.000068	0.000137	0.000052	0.000145	0.000025	0.000033	0.000044	0.000026	0.000023	0.000014	0.000307	0.000043	0.000403	1.016182	0.004118	0.000648	0.000049	0.000022	0.000006	N 14
N 15	Miscellaneous agri. processing	0.017888	0.028453	0.008062	0.002133	0.001102	0.001897	0.002735	0.001638	0.001208	0.000754	0.073780	0.005365	0.098173	0.066165	1.100626	0.047205	0.002568	0.000719	0.000177	N 15
N 16	Chemicals and fertilizers	0.028202	0.032327	0.018530	0.056645	0.031514	0.047365	0.069126	0.041485	0.029363	0.015904	0.342596	0.214819	0.038264	0.042895	0.030142	1.234121	0.044254	0.015022	0.003574	N 16
N 17	Petroleum	0.038374	0.055562	0.026296	0.042445	0.025096	0.033062	0.061233	0.030406	0.047604	0.020814	0.132251	0.021334	0.027362	0.032773	0.013508	0.007530	1.836393	0.013415	0.004487	N 17
N 18	Fabricated metals and machinery	0.055196	0.045772	0.036236	0.089030	0.021726	0.035531	0.052112	0.027412	0.049552	0.020263	0.039169	0.027457	0.029422	0.127675	0.029446	0.029233	0.039234	1.176939	0.057405	N 18
N 19	Aircraft and parts	0.000611	0.000564	0.000183	0.000667	0.000309	0.000370	0.000468	0.000258	0.000367	0.000233	0.000451	0.001176	0.000665	0.000612	0.000563	0.000600	0.000599	0.001181	1.031091	N 19
N 20	Primary metals	0.001537	0.001562	0.000679	0.133436	0.003660	0.006074	0.008699	0.004692	0.007607	0.001266	0.007036	0.004593	0.005821	0.020718	0.006089	0.016971	0.007838	0.160990	0.037346	N 20
N 21	Other manufacturing	0.021854	0.013155	0.015509	0.019752	0.009702	0.010332	0.016816	0.022264	0.010612	0.010248	0.048317	0.017904	0.053337	0.074551	0.032285	0.046147	0.022531	0.044402	0.018196	N 21
N 22	Mining	0.000482	0.000349	0.000709	0.001737	0.001276	0.002158	0.002961	0.001650	0.001968	0.001017	0.004970	0.001984	0.003424	0.005125	0.002656	0.013857	0.026892	0.017893	0.004252	N 22
N 23	Utilities	0.223557	0.192133	0.191120	0.017356	0.013169	0.014801	0.020529	0.012120	0.010036	0.015429	0.015875	0.019831	0.025733	0.024319	0.021022	0.030722	0.038356	0.022011	0.009922	N 23
N 24	Selected services	0.016720	0.018429	0.016886	0.019551	0.007637	0.011511	0.015792	0.008620	0.012174	0.007093	0.041241	0.042262	0.022002	0.015210	0.013881	0.016129	0.011362	0.007171	0.002465	N 24
N 25	Trade and transportation	0.104771	0.131174	0.047400	0.067415	0.031430	0.037436	0.045298	0.028291	0.035354	0.026716	0.095313	0.101243	0.171528	0.135446	0.250748	0.147267	0.106663	0.082059	0.025514	N 25
N 26	Unallocated	0.101328	0.074500	0.073744	0.131365	0.083098	0.059590	0.056048	0.031866	0.064580	0.041577	0.086440	0.109484	0.112977	0.098640	0.115210	0.122319	0.199253	0.074218	0.021099	N 26
S 1	Meat animals and products	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000004	S 1
S 2	Poultry and eggs	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000060	0.000000	0.000000	0.000000	0.000000	0.000036	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	S 2
S 3	Farm dairy products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	S 3
S 4	Food and feed grains	0.000002	0.000001	0.000002	0.000003	0.000009	0.000004	0.000002	0.000002	0.000003	0.000003	0.000001	0.000001	0.000001	0.000004	0.000002	0.000001	0.000000	0.000000	0.000000	S 4
S 5	Cotton	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	S 5
S 6	Vegetables	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	S 6
S 7	Fruit (excluding citrus) & nuts	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	S 7
S 8	Citrus	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	S 8
S 9	Forage	0.000033	0.000014	0.000027	0.000042	0.003149	0.000068	0.000035	0.000029	0.000047	0.000045	0.000018	0.000011	0.000014	0.000038	0.000036	0.000011	0.000000	0.000000	0.000000	S 9
S 10	Miscellaneous agriculture	0.003864	0.001591	0.001021	0.005828	0.016565	0.007562	0.003864	0.003266	0.005252	0.004997	0.002037	0.001222	0.002744	0.006445	0.004002	0.001421	0.000057	0.000023	0.000020	S 10
S 11	Grain mill products	0.000004	0.000032	0.000003	0.000026	0.000017	0.000008	0.000004	0.000003	0.000005	0.000005	0.000002	0.000001	0.000002	0.000007	0.000004	0.000002	0.000000	0.000000	0.000003	S 11
S 12	Meat and poultry processing	0.000002	0.000002	0.000002	0.000002	0.000003	0.000002	0.000002	0.000001	0.000002	0.000001	0.000001	0.000001	0.000002	0.000003	0.000003	0.000002	0.000001	0.000001	0.000020	S 12
S 13	Dairy products	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000002	S 13
S 14	Canning, preserving, freezing	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000002	S 14
S 15	Miscellaneous agri. processing	0.000003	0.000002	0.000002	0.000004	0.000009	0.000005	0.000003	0.000002	0.000003	0.000002	0.000003	0.000002	0.000003	0.000005	0.000004	0.000002	0.000001	0.000002	0.000032	S 15
S 16	Chemicals and fertilizers	0.000096	0.000057	0.000074	0.000136	0.000308	0.000152	0.000092	0.000071	0.000111	0.000100	0.000257	0.000077	0.000157	0.000144	0.000103	0.000056	0.000029	0.000045	0.000134	S 16
S 17	Petroleum	0.000096	0.000106	0.000106	0.000168	0.000350	0.000178	0.000113	0.000085	0.000132	0.000118	0.000189	0.000111	0.000115	0.000174	0.000175	0.000098	0.000057	0.000068	0.000104	S 17
S 18	Fabricated metals and machinery	0.000480	0.000193	0.000177	0.000575	0.000818	0.000427	0.000394	0.000246	0.000363	0.000275	0.000335	0.000721	0.000470	0.000548	0.000469	0.000415	0.000363	0.000663	0.016780	S 18
S 19	Aircraft and parts	0.004653	0.002476	0.002892	0.001751	0.002290	0.002734	0.003455	0.001903	0.002700	0.001719	0.003311	0.007958	0.004896	0.004494	0.004137	0.004404	0.004362	0.008507	0.222921	S 19
S 20	Primary metals	0.000184	0.000141	0.000121	0.000212	0.000149	0.000132	0.000145	0.000084	0.000121	0.000084	0.000133	0.000307	0.000193	0.000194	0.000175	0.000173	0.000164	0.000311	0.008046	S 20
S 21	Other manufacturing	0.000227	0.000148	0.000159	0.000264	0.000312	0.000207	0.000184	0.000116	0.000172	0.000134	0.000158	0.000328	0.000227	0.000264	0.000244	0.000196	0.000157	0.000246	0.005586	S 21
S 22	Mining	0.000227	0.000229	0.000919	0.000332	0.000030	0.000023	0.000022	0.000013	0.000020	0.000014	0.000020	0.000042	0.000328	0.000031	0.000028	0.000025	0.000022	0.000040	0.001004	S 22
S 23	Utilities	0.000177	0.000237	0.000344	0.000130	0.000716	0.000121	0.000067	0.000062	0.000094	0.000079	0.000376	0.000120	0.000136	0.000145	0.000140	0.000091	0.000064	0.000087	0.001697	S 23
S 24	Selected services	0.001181	0.000588	0.000411	0.000716	0.000384	0.000448	0.000368	0.000310	0.000410	0.000282	0.000448	0.001446	0.000722	0.000581	0.000548	0.000583	0.000408	0.000276	0.000683	S 24
S 25	Trade and transportation	0.001151	0.001337	0.001015	0.000909	0.000789	0.000617	0.000613	0.000369	0.000538	0.000420	0.000983	0.001191	0.001276	0.001581	0.002390	0.001444	0.001053	0.000946	0.006243	S 25
S 26	Unallocated	0.000588	0.000500	0.000448	0.000656	0.000961	0.000575	0.000458	0.000305	0.000455	0.000377	0.000417	0.000721	0.000616	0.000741	0.000781	0.000522	0.000360	0.000401	0.005946	S 26

(Continued on next page)

TABLE B-5 continued

Sector number	Sector title	N 20 Primary metals	N 21 Other mfg.	N 22 Mining	N 23 Utilities	N 24 Selected services	N 25 Trade and trans.	N 26 Unal-located	S 1 Meat animals	S 2 Poultry and eggs	S 3 Farm dairy prod.	S 4 Grains	S 5 Cotton	S 6 Veg	S 7 Fruit and nuts	S 8 Citrus	S 9 Forage	S 10 Misc agri.	S 11 Grain mill prod	S 12 Meat & poultry proc.	Sector number
N 1	Meat animals and products	0.000083	0.002274	0.000093	0.000101	0.000199	0.000215	0.001014	0.000015	0.000020	0.000011	0.000002	0.000001	0.000031	0.000001	0.000001	0.000001	0.000031	0.000008	0.000087	N 1
N 2	Poultry and eggs	0.000019	0.000060	0.000021	0.000022	0.000044	0.000047	0.000218	0.000012	0.045720	0.000009	0.000008	0.000005	0.000005	0.000006	0.000003	0.000004	0.000003	0.000050	0.013648	N 2
N 3	Farm dairy products	0.000018	0.000045	0.000015	0.000007	0.000030	0.000079	0.000052	0.000041	0.000123	0.000031	0.000008	0.000004	0.000036	0.000008	0.000005	0.000004	0.000003	0.000352	0.000292	N 3
N 4	Food and feed grains	0.000047	0.000133	0.000047	0.000028	0.000063	0.000172	0.002250	0.006495	0.018187	0.003148	0.001587	0.000015	0.000009	0.000008	0.000005	0.000007	0.000095	0.011474	0.004567	N 4
N 5	Cotton	0.000004	0.000162	0.000036	0.000004	0.000007	0.000002	0.000006	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 5
N 6	Vegetables	0.000003	0.000008	0.000032	0.000001	0.000005	0.000013	0.000008	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 6
N 7	Fruit (excluding citrus) & nuts	0.000031	0.000078	0.000027	0.000007	0.000024	0.000032	0.000045	0.000110	0.000285	0.000081	0.000045	0.000026	0.000037	0.000053	0.000032	0.000024	0.000014	0.000921	0.000050	N 7
N 8	Citrus	0.000000	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 8
N 9	Forage	0.000037	0.000128	0.000039	0.000037	0.000078	0.000093	0.000356	0.149103	0.001730	0.115493	0.000374	0.001244	0.000484	0.000258	0.000213	0.001338	0.028164	0.005615	0.028677	N 9
N 10	Miscellaneous agriculture	0.000168	0.001490	0.000187	0.000045	0.000121	0.000057	0.000144	0.005677	0.000807	0.004348	0.000076	0.000039	0.000019	0.000011	0.000009	0.000013	0.000301	0.000678	0.001233	N 10
N 11	Grain mill products	0.000093	0.000247	0.000090	0.000035	0.000088	0.000098	0.000287	0.000034	0.014427	0.000026	0.000004	0.000002	0.000002	0.000003	0.000002	0.000002	0.000003	0.000059	0.004349	N 11
N 12	Meat and poultry processing	0.000284	0.006891	0.000318	0.000343	0.000679	0.000734	0.001466	0.000051	0.000068	0.000039	0.000005	0.000003	0.000003	0.000003	0.000002	0.000002	0.000004	0.000027	0.000298	N 12
N 13	Dairy products	0.000042	0.000105	0.000036	0.000017	0.000071	0.000184	0.000121	0.000096	0.000289	0.000072	0.000018	0.000010	0.000014	0.000019	0.000011	0.000009	0.000007	0.000825	0.000684	N 13
N 14	Canning, preserving, freezing	0.000026	0.000074	0.000022	0.000011	0.000045	0.000123	0.000076	0.000004	0.000006	0.000003	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000003	N 14
N 15	Miscellaneous agri. processing	0.001007	0.002408	0.000841	0.000206	0.000617	0.000443	0.001270	0.000203	0.001111	0.000154	0.000006	0.000002	0.000002	0.000002	0.000001	0.000001	0.000011	0.000110	0.000418	N 15
N 16	Chemicals and fertilizers	0.017241	0.046919	0.018816	0.002409	0.009252	0.002998	0.007083	0.004737	0.001745	0.003599	0.000101	0.000034	0.000018	0.000012	0.000009	0.000012	0.000246	0.000877	0.001316	N 16
N 17	Petroleum	0.022380	0.015829	0.030360	0.017334	0.015286	0.033649	0.010222	0.007675	0.002745	0.005831	0.000162	0.000053	0.000076	0.000017	0.000013	0.000018	0.000398	0.001356	0.002090	N 17
N 18	Fabricated metals and machinery	0.054989	0.035427	0.047226	0.010571	0.045684	0.009615	0.013488	0.007945	0.002540	0.006044	0.000157	0.000055	0.000027	0.000017	0.000013	0.000019	0.000413	0.001324	0.002089	N 18
N 19	Aircraft and parts	0.000372	0.000728	0.000287	0.000265	0.022113	0.001027	0.002146	0.000059	0.000027	0.000045	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000003	0.000011	0.000018	N 19
N 20	Primary metals	1.212848	0.227189	0.032049	0.003288	0.008374	0.002543	0.004620	0.001188	0.000408	0.000904	0.000024	0.000008	0.000004	0.000003	0.000002	0.000003	0.000062	0.000201	0.000322	N 20
N 21	Other manufacturing	0.029089	1.209720	0.046168	0.029179	0.049513	0.018676	0.045662	0.001712	0.001406	0.001302	0.000037	0.000013	0.000007	0.000006	0.000004	0.000005	0.000089	0.000351	0.000732	N 21
N 22	Mining	0.122243	0.017351	1.098936	0.001147	0.002230	0.001440	0.002664	0.000317	0.000159	0.000241	0.000007	0.000002	0.000001	0.000001	0.000001	0.000001	0.000016	0.000057	0.000101	N 22
N 23	Utilities	0.045189	0.028416	0.039639	1.205933	0.023281	0.035782	0.026591	0.001607	0.001073	0.001223	0.000032	0.000012	0.000006	0.000004	0.000003	0.000004	0.000084	0.000285	0.000605	N 23
N 24	Selected services	0.008810	0.010276	0.005174	0.003982	1.076115	0.022817	0.018726	0.001730	0.000801	0.001316	0.000035	0.000012	0.000006	0.000004	0.000003	0.000004	0.000090	0.000305	0.000545	N 24
N 25	Trade and transportation	0.109659	0.099618	0.058358	0.023986	0.055364	1.046872	0.049604	0.005709	0.005580	0.004338	0.000122	0.000041	0.000022	0.000016	0.000011	0.000015	0.000296	0.001118	0.002713	N 25
N 26	Unallocated	0.064172	0.065327	0.076445	0.106746	0.189696	0.154270	1.148367	0.010453	0.004642	0.007935	0.000229	0.000072	0.000036	0.000023	0.000018	0.000025	0.000540	0.001939	0.003167	N 26
S 1	Meat animals and products	0.000000	0.000000	0.000000	0.000000	0.000003	0.000000	0.000000	1.000089	0.000149	0.000067	0.000100	0.000062	0.000060	0.000070	0.000041	0.000052	0.000032	0.000438	0.190214	S 1
S 2	Poultry and eggs	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000130	1.169481	0.000023	0.000029	0.000018	0.000018	0.000021	0.000012	0.000015	0.000009	0.000179	0.050530	S 2
S 3	Farm dairy products	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000125	0.000319	1.025504	0.000025	0.000014	0.000019	0.000026	0.000015	0.000013	0.000009	0.001151	0.000924	S 3
S 4	Food and feed grains	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.040351	0.052729	0.023235	1.009912	0.000085	0.000047	0.000036	0.000026	0.000033	0.000593	0.071209	0.009974	S 4
S 5	Cotton	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000003	0.000004	0.000002	0.000004	1.002326	0.000006	0.000007	0.000004	0.000002	0.000002	0.000008	0.000003	S 5
S 6	Vegetables	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000004	0.000008	0.000003	0.000005	0.000003	1.003269	0.000005	0.000003	0.000003	0.000002	0.000021	0.000003	S 6
S 7	Fruit (excluding citrus) & nuts	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000031	0.000077	0.000023	0.000013	0.000006	0.000011	1.000016	0.000009	0.000007	0.000004	0.000276	0.000012	S 7
S 8	Citrus	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000002	0.000000	S 8
S 9	Forage	0.000000	0.000002	0.000000	0.000000	0.000001	0.000000	0.000000	0.170623	0.001730	0.132167	0.000424	0.001193	0.000552	0.000292	0.000242	1.000385	0.009342	0.006318	0.032641	S 9
S 10	Miscellaneous agriculture	0.000025	0.000178	0.000027	0.000007	0.000028	0.000009	0.000022	0.016807	0.003039	0.015493	0.044850	0.131381	0.060006	0.030701	0.025886	0.041661	1.039240	0.005144	0.003466	S 10
S 11	Grain mill products	0.000000	0.000000	0.000000	0.000000	0.000002	0.000000	0.000000	0.101728	0.273497	0.076037	0.000202	0.000219	0.000188	0.000215	0.000136	0.000125	0.001051	1.010973	0.031248	S 11
S 12	Meat and poultry processing	0.000001	0.000001	0.000001	0.000000	0.000016	0.000001	0.000002	0.000484	0.000812	0.000361	0.000544	0.000338	0.000325	0.000378	0.006221	0.000281	0.000173	0.002381	1.035520	S 12
S 13	Dairy products	0.000000	0.000000	0.000000	0.000000	0.000002	0.000000	0.000000	0.000326	0.000830	0.000245	0.000064	0.000037	0.000049	0.000068	0.000040	0.000034	0.000023	0.002992	0.002402	S 13
S 14	Canning, preserving, freezing	0.000000	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000040	0.000072	0.000032	0.000047	0.000027	0.000036	0.000048	0.000029	0.000025	0.000015	0.000202	0.000027	S 14
S 15	Miscellaneous agri. processing	0.000001	0.000001	0.000001	0.000000	0.000024	0.000002	0.000003	0.005083	0.012899	0.003757	0.001701	0.000979	0.001427	0.002051	0.001227	0.000910	0.000533	0.046710	0.001845	S 15
S 16	Chemicals and fertilizers	0.000020	0.000035	0.000014	0.000011	0.004766	0.000045	0.000081	0.017598	0.020400	0.011343	0.064814	0.037230	0.055865	0.081276	0.048742	0.034702	0.018435	0.042793	0.009690	S 16
S 17	Petrileum	0.000048	0.000062	0.000030	0.000018	0.000826	0.000061	0.000099	0.018335	0.030582	0.012981	0.090486	0.025605	0.039578	0.061813	0.030756	0.048058	0.020487	0.014679	0.011869	S 17
S 18	Fabricated metals and machinery	0.000233	0.000432	0.000175	0.000155	0.012105	0.000612	0.001206	0.047562	0.035403	0.030857	0.118008	0.030276	0.049023	0.071538	0.037689	0.067519	0.027038	0.026083	0.022346	S 18
S 19	Aircraft and parts	0.002714	0.005282	0.002093	0.001925	0.158894	0.007487	0.015484	0.004554	0.003643	0.002959	0.006299	0.002957	0.003476	0.004353	0.002406	0.003448	0.002142	0.002759	0.008499	S 19
S 20	Primary metals	0.000103	0.000197	0.000079	0.000071	0.005758	0.000278	0.000566	0.006984	0.005570	0.004542	0.016429	0.004594	0.007694	0.010967	0.005899	0.009349	0.004024	0.004951	0.003731	S 20
S 21	Other manufacturing	0.000111	0.000178	0.000077	0.000062	0.004148	0.000246	0.000438	0.023052	0.032248	0.016488	0.029358	0.014834	0.042706	0.051844	0.031245	0.016234	0.014570	0.059209	0.019614	S 21
S 22	Mining	0.000014	0.000026	0.000011	0.000009	0.000723	0.000036	0.000072	0.001870	0.002417	0.001291	0.004337	0.001575	0.002631	0.003573	0.001995	0.002384	0.001209	0.004489	0.001666	S 22
S 23	Utilities	0.000050	0.000070	0.000032	0.000022	0.001260	0.000080	0.000139	0.014850	0.014468	0.011664	0.013670	0.010516	0.011857	0.016168	0.009527	0.008165	0.011758	0.009152	0.012195	S 23
S 24	Selected services	0.000320	0.000375	0.000192	0.000141	0.002963	0.000783	0.000670	0.015056	0.012173	0.008386	0.020473	0.004426	0.012417	0.016895	0.009255	0.011587	0.007470	0.008206	0.040242	S 24
S 25	Trade and transportation	0.001029	0.001019	0.000569	0.000265	0.004909	0.000645	0.000878	0.089815	0.107539	0.087270	0.071384	0.034172	0.041026	0.049765	0.028870	0.038410	0.027984	0.077292	0.085239	S 25
S 26	Unallocated	0.000302	0.000372	0.000183	0.000116	0.004824	0.000431	0.000618	0.087642	0.071230	0.065723	0.157738	0.102209	0.074545	0.070971	0.040389	0.080205	0.050184	0.067567	0.108561	S 26

(Continued on next page.)

TABLE B-5 continued

Sector number	Sector title	S 13 Dairy prod.	S 14 Canning, preserving, freezing	S 15 Misc. agri proc.	S 16 Chem. and fert	S 17 Petro-leum	S 18 Fab. metals & mach.	S 19 Air-craft	S 20 Primary metals	S 21 Other mfg.	S 22 Mining	S 23 Utilities	S 24 Selected services	S 25 Trade and trans.	S 26 Unal-located	Sector number
N 1	Meat animals and products	0.000019	0.000031	0.000025	0.000008	0.000002	0.000001	0.000000	0.000001	0.000002	0.000001	0.000001	0.000002	0.000002	0.000006	N 1
N 2	Poultry and eggs	0.000056	0.000114	0.000523	0.000056	0.000011	0.000004	0.000002	0.000004	0.000012	0.000004	0.000004	0.000009	0.000009	0.000039	N 2
N 3	Farm dairy products	0.008021	0.000650	0.004473	0.000105	0.000008	0.000004	0.000001	0.000004	0.000010	0.000004	0.000002	0.000007	0.000017	0.000011	N 3
N 4	Food and feed grains	0.002396	0.000199	0.000701	0.000066	0.000006	0.000003	0.000001	0.000003	0.000007	0.000003	0.000002	0.000005	0.000036	0.000016	N 4
N 5	Cotton	0.000000	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 5
N 6	Vegetables	0.000001	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 6
N 7	Fruit (excluding citrus) & nuts	0.001238	0.129989	0.023751	0.000791	0.000047	0.000016	0.000005	0.000021	0.000051	0.000018	0.000005	0.000017	0.000023	0.000028	N 7
N 8	Citrus	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 8
N 9	Forage	0.048340	0.001054	0.004974	0.000258	0.000030	0.000013	0.000005	0.000013	0.000043	0.000013	0.000011	0.000025	0.000030	0.000089	N 9
N 10	Miscellaneous agriculture	0.001984	0.003531	0.003627	0.000035	0.000003	0.000001	0.000000	0.000001	0.000003	0.000001	0.000001	0.000002	0.000002	0.000005	N 10
N 11	Grain mill products	0.000900	0.000146	0.000225	0.000030	0.000004	0.000002	0.000001	0.000002	0.000005	0.000002	0.000002	0.000004	0.000005	0.000014	N 11
N 12	Meat and poultry processing	0.000052	0.000107	0.000086	0.000026	0.000006	0.000002	0.000001	0.000002	0.000006	0.000002	0.000002	0.000005	0.000005	0.000022	N 12
N 13	Dairy products	0.016781	0.001522	0.001157	0.000267	0.000319	0.000009	0.000003	0.000010	0.000025	0.000009	0.000004	0.000017	0.000039	0.000026	N 13
N 14	Canning, preserving, freezing	0.000008	0.000006	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 14
N 15	Miscellaneous agri. processing	0.001756	0.000496	0.000127	0.000026	0.000002	0.000001	0.000000	0.000001	0.000003	0.000001	0.000001	0.000002	0.000004	0.000003	N 15
N 16	Chemicals and fertilizers	0.002185	0.009070	0.001541	0.000674	0.000305	0.000002	0.000001	0.000002	0.000006	0.000002	0.000001	0.000003	0.000004	0.000077	N 16
N 17	Petroleum	0.002885	0.008048	0.001478	0.000772	0.000005	0.000002	0.000001	0.000002	0.000007	0.000002	0.000001	0.000003	0.000004	0.000009	N 17
N 18	Fabricated metals and machinery	0.002995	0.006867	0.001219	0.000265	0.000305	0.000022	0.000001	0.000002	0.000006	0.000002	0.000001	0.000003	0.000004	0.000009	N 18
N 19	Aircraft and parts	0.000030	0.000062	0.000011	0.000001	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 19
N 20	Primary metals	0.000474	0.001147	0.000203	0.000911	0.000001	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000001	0.000001	0.000001	N 20
N 21	Other manufacturing	0.001485	0.004873	0.003857	0.000046	0.000003	0.000001	0.000000	0.000002	0.000004	0.000001	0.000001	0.000002	0.000003	0.000005	N 21
N 22	Mining	0.000159	0.000392	0.000070	0.000034	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	N 22
N 23	Utilities	0.000958	0.002717	0.000481	0.000027	0.000002	0.000001	0.000000	0.000001	0.000002	0.000001	0.000000	0.000001	0.000002	0.000003	N 23
N 24	Selected services	0.000892	0.002094	0.000377	0.000072	0.000002	0.000001	0.000000	0.000001	0.000002	0.000001	0.000000	0.000001	0.000002	0.000003	N 24
N 25	Trade and transportation	0.004753	0.006176	0.001241	0.000394	0.000008	0.000003	0.000001	0.000004	0.000010	0.000003	0.000002	0.000006	0.000010	0.000015	N 25
N 26	Unallocated	0.005200	0.007518	0.001445	0.000397	0.000008	0.000003	0.000001	0.000004	0.000010	0.000003	0.000002	0.000006	0.000008	0.000015	N 26
S 1	Meat animals and products	0.000185	0.001267	0.001824	0.000576	0.000134	0.000057	0.000020	0.000054	0.000157	0.000057	0.000059	0.000123	0.000123	0.000525	S 1
S 2	Poultry and eggs	0.000172	0.000396	0.001915	0.000270	0.000018	0.000016	0.000006	0.000015	0.000042	0.000016	0.000016	0.000033	0.000033	0.000141	S 2
S 3	Farm dairy products	0.410764	0.002100	0.001516	0.000344	0.000026	0.000012	0.000004	0.000014	0.000034	0.000012	0.000006	0.000023	0.000055	0.000036	S 3
S 4	Food and feed grains	0.009523	0.000528	0.003314	0.000261	0.000019	0.000007	0.000002	0.000008	0.000021	0.000008	0.000004	0.000010	0.000010	0.000133	S 4
S 5	Cotton	0.000099	0.000013	0.000006	0.000009	0.000004	0.000009	0.000004	0.000006	0.000171	0.000009	0.000005	0.000010	0.000004	0.000008	S 5
S 6	Vegetables	0.000028	0.107828	0.000423	0.000064	0.000006	0.000003	0.000001	0.000003	0.000009	0.000003	0.000001	0.000005	0.000013	0.000008	S 6
S 7	Fruit (excluding citrus) & nuts	0.000359	0.039059	0.006234	0.000237	0.000014	0.000005	0.000002	0.000006	0.000015	0.000005	0.000002	0.000005	0.000057	0.000508	S 7
S 8	Citrus	0.000003	0.009775	0.000038	0.000006	0.000001	0.000000	0.000000	0.000000	0.000001	0.000000	0.000000	0.000000	0.000001	0.000001	S 8
S 9	Forage	0.052996	0.000935	0.005955	0.000261	0.000031	0.000014	0.000005	0.000014	0.000046	0.000014	0.000011	0.000026	0.000029	0.000096	S 9
S 10	Miscellaneous agriculture	0.008178	0.046833	0.029452	0.011020	0.003496	0.000221	0.000076	0.000237	0.001529	0.000252	0.000063	0.000178	0.000071	0.001161	S 10
S 11	Grain mill products	0.032590	0.005052	0.003721	0.002778	0.001153	0.000056	0.000018	0.000066	0.000167	0.000063	0.000021	0.000057	0.000057	0.006137	S 11
S 12	Meat and poultry processing	0.001004	0.006892	0.009929	0.003240	0.000729	0.000310	0.000109	0.000293	0.000805	0.000309	0.000321	0.000669	0.000667	0.002856	S 12
S 13	Dairy products	1.067937	0.005459	0.003973	0.002833	0.000068	0.000032	0.000011	0.000037	0.000088	0.000031	0.000015	0.000059	0.000142	0.000093	S 13
S 14	Canning, preserving, freezing	0.000264	1.016094	0.003983	0.000636	0.000052	0.000026	0.000009	0.000030	0.000080	0.000024	0.000012	0.000051	0.000126	0.000078	S 14
S 15	Miscellaneous agri. processing	0.060770	0.042015	1.063734	0.031030	0.001857	0.000580	0.000180	0.000798	0.001837	0.000652	0.000166	0.000508	0.000325	0.000879	S 15
S 16	Chemicals and fertilizers	0.038221	0.040042	0.031617	1.272261	0.052245	0.019225	0.005807	0.022430	0.058084	0.022929	0.003341	0.012817	0.004082	0.009274	S 16
S 17	Petroleum	0.020208	0.025278	0.010854	0.007887	1.836961	0.014452	0.006107	0.024457	0.017247	0.039801	0.016944	0.016793	0.033979	0.010723	S 17
S 18	Fabricated metals and machinery	0.029429	0.163340	1.036140	0.041363	0.054271	1.239758	0.094374	0.080493	0.051407	0.046631	0.014511	0.076944	0.014248	0.020403	S 18
S 19	Aircraft and parts	0.005479	0.005681	0.004896	0.005616	0.005761	0.010521	1.254284	0.003753	0.006721	0.002837	0.002502	0.181832	0.009051	0.018209	S 19
S 20	Primary metals	0.005696	0.024078	0.006740	0.017985	0.009580	0.157167	0.045267	1.214834	0.028678	0.032237	0.003746	0.016792	0.003332	0.005923	S 20
S 21	Other manufacturing	0.067787	0.096458	0.041950	0.065231	0.033521	0.364136	0.031370	0.043935	1.285014	0.063953	0.039078	0.073853	0.027079	0.063812	S 21
S 22	Mining	0.003423	0.005772	0.002820	0.116694	0.027411	0.019087	0.005647	0.132224	0.018738	1.099481	0.001360	0.003560	0.001730	0.003121	S 22
S 23	Utilities	0.017604	0.017131	0.015300	0.024691	0.029627	0.017810	0.004509	0.038811	0.021385	0.030194	1.153084	0.019722	0.027289	0.020693	S 23
S 24	Selected services	0.018864	0.019905	0.013699	0.017529	0.012673	0.008258	0.003411	0.010283	0.011686	0.005883	0.004414	1.080197	0.024186	0.020040	S 24
S 25	Trade and transportation	0.156073	0.131114	0.244484	0.151763	0.111620	0.089467	0.033914	0.122085	0.108871	0.062242	0.025231	0.064636	1.049545	0.053323	S 25
S 26	Unallocated	0.117907	0.111888	0.131882	0.115.112	0.242270	0.095191	0.033158	0.084941	0.085105	0.094060	0.124299	0.235840	0.186499	1.180463	S 26

a/ Each entry shows dollars of direct plus indirect requirements for products of N. California or S. California listed at the left per dollar of final demand for products of N. California or S. California sector listed at the top.

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